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ADDITIONS AND CORRECTIONS.

Page 2, l. 5.—For *-riddhyud-* read *-riddhyud-*

„ „ „ 24.—For (*puram*) read (*puravu*).

„ 6, Translation of l. 37—Śivāṅkāśrayēbhyaḥ translated "who resided near (the temple of) Śiva" suggests that the recipient Brahmins had their homes near the Paraśurāmēśvara temple at Guḍimallam, for which there are not sufficient indications at present. Perhaps a better interpretation of the compound would be Śivāṅkānāṁ āśrayāḥ, the abodes of symbols (such as ashes, beads, liṅga etc.) of Śiva.

„ 10, l. 15.—*For* Chāṇḍāla *read* Chāṇḍāḷa.

„ 11, Text l. 3.—[Possibly Niya was the name of the carpenter (*vaḍaki*) who made the gift.—H. K. S.]

„ „ l. 38.—*For* Bhūmi naga *read* Bhūmināga.

„ 12 „ 8.—*For* blocks have *read* block has.

„ „ last line.—*For* before *r*, *read* after *r*,

„ 13.—*Insert* at the end of the introduction on page 13. [Prof. Hultzsch and Mr. K. N. Dikshit have simultaneously invited my attention to Dr. Sukthankar's omission to have noted the very important paper on the Poona plates of the Vākāṭaka queen Prabhāvati Guptā, the daughter of the Gupta Emperor Chandra Gupta II, which Messrs. Dikshit and Pathak had together published on p. 39 of Vol. XV of the *Ep. Ind.* From this it is clear that Prabhāvati Guptā and her husband Rudrasēna II, the sixth in descent from Pravarasēna II, were contemporaries of Chandra Gupta II, the son and successor of Samudra Gupta of the beginning of the 5th Century A.C. Consequently, the Ganj inscription which, palæographically is ascribed to be that of Pṛithvīshēṇa I, must belong to about the end of the 4th Century A.C.; but it is very unlikely that the Pṛithvīshēṇa of this inscription is the first of that name. If, however, he is the second, the record may be roughly referred to the beginning of the 6th Century A.C.—H. K. S.]

Page 15, f. n. 2, 4th line—*for* श्री महेन्द्रविक्रमवर्मा *read* श्रीमहेन्द्रविक्रमवर्मा

„ 18, l. 16—insert comma after 307.

„ 106, l. 11—For *bhātu-vāta°* read *bhūta-vāta°*.

„ „ paras. 3 & 4.—[Dr. Sukthaṅkar in criticising Dr. Sten Konow with regard to the meaning of प्रावेश्य has not noted the significance of the word एतत् which occurs in एतत् प्रावेश्य of line 4 of the Khariar grant of Mahāsudēva where two villages Navannaka and Śāmbilaka adjoining Navannaka, were granted. There is, thus, no indication of Navannaka being a territorial division expressed by the term प्रावेश्य added to it as supposed by Sukthankar, whereas प्रावेश्य as an independent word indicates certainly the sense of proximity, or better, a dependence on the village immediately mentioned before it.—Ed.]

„ 107, Text, l. 10.—*Insert* कवि after स्वामायुक्त°

„ „ f. n. 6.—*For* वंव *read* न्नेव.

„ „ „ 7.—*For* ग्रामवास्तव्य° *read* ग्रामे वास्तव्य°

Page 108.—*Inscription B.*—The missing second plate of this inscription has been discovered at Iyāveja by Mr. D. B. Diskalkar, M.A., Curator, Watson Museum of Antiquities, Rajkot, and will shortly be published by him in this journal.—Ed.

" 108, f. n. 2.—For *upadmānīya* read *upadhmānīya.*

" 109, l. 10.—Dr. Sukthankar is not right in his guess; for the *dūtaka* of the grant as found in the missing plate is Rudradhara. But the writer was Kikkaka, here spelt Kikaka.—Ed.

" 109, f. n. 2.—*For* Dhruvasōna *read* Dhruvasēna.

" 110, l. 3.—*For* Rotghamitra *read* Rōtghamitra.

" " l. 5.—*For* Āśvina *read* Āśvayuja.

" " Text l. 7.—*For* -gītau *read* -gītau.

" " " 8.—*For* āchchhettā *read* āchchhēttā.

" " " 9.—To =vvā, *add* the footnote 'Read =vā'.—Ed.

" " " 11.—*For* Kikkakena *read* Kikkakēna.

" " f. n. 2.—For *āgami* read *āgāmi.*

"* 111, l. 3.—*For* '34' *read* '33'.

" " " 8.—*For* 'these two sets' *read* 'this set'.

" " " 16.—*For* Tirunalūr *read* Tirunālūr.

" " " " —*For* °nallūr *read* °nalūr.

" " " " —*For* 'Sunepuha°-' *read* 'Sunaipuha°-.'

" " " 17.—*Insert* after 'Nārāyaṇāmbikā', "or Nāraṇadēvi-auva."

" " " 11 from the bottom.—*For* Tirunalūr *read* Tirunālūr.

" " " " " " *For* -°perumā-nallūr *read* °perumā-nalūr.

" " " 10 " " *For* Sune° *read* Sunai°.

" " " 9 " " *For* Mēlmuṟi *read* Mēlemuri.

" " " " " " *For* Maḷa-nāḍu *read* Maḷa-nāḍu.

" " " 8 " " *Insert* before 'villages', "first three".

" " " 7 " " *For* Tiruchchirāppaḷḷi *read* Tiruchchirāpalli.

" " " 5 " " *Insert* after 'twelve' the following: "*harivāṇas* of food should be supplied, one".

" " " " " " *For* lamps *read* lamp.

" " " " " " *Insert* after 'burned' "one".

" " " " " " *For* garlands *read* garland.

" " last line.— *For* 1,82 *read* 1,823.

" 112, l. 2.—Insert '*rāṇ-payir*' after '*punśey*'.

" " " " For °*ppēṟu*° read °*pperu*°.

" " " 3.—Cancel (*taṟi-kaḍamai*).

" " " " For *āḷukku*° read *oḷukku*°.

" " " 4.—For *kaṭṭigai-arasaram* read *kaṭhige-arasara.*

" " " " For *paṭai-kāṇikkai* read *paḍai-kāṇike.*

" " " 10.—For *Pāṟ*° read *Pēr.*

" " " 11.—Omit the passage from *Āḷukku*° to *ntrāṇikkam* in l. 13.

" " " 13.—For *Magamai* read *mahamai.*

" " " 17.—For *Kaṭṭigai-arasaram* read *Kaṭhige-arasara* and *add* in a foot-note [This term does not indicate any tax on firewood as the author suggests but may have to be connected with *kaṭṭige-yara*, a mace-bearer, or in this case the village servant who carries the staff of office with him.—Ed.]

*[The following numerous corrections on pp. 111 to 117 have been necessitated by the proof being passed by the office in the belief that it had been revised by the author].

Page 112, l. 18.—*For* -kkāṇikkai *read* kāṇike.
„ „ „ 23.—*For* Tiruchchirāppaḷḷi *read* Tiruchchirāpalli
„ „ „ 23.—*For* Tirunalūr *read* Tirunālūr.
„ „ „ 24.—*For* Śeranai° *read* Śēranai° and *for* °nallūr *read* °nalūr.
„ „ „ 24.—*For* Melmuṛi *read* Mēlemuri.
„ „ „ 24.—*For* Maḷa-*nāḍu* *read* Maḷa-nāḍu.
„ „ „ 24.—*For* Sune° *read* Sunai°.
„ „ „ 26.—*For* Tiruchchirāppaḷḷi *read* Tiruchchirāpalli.
„ „ „ 29.—*For* Maḷa-*nāḍu* *read* **Maḷa** nāḍu.
„ „ „ 33.—*For* Tirunalūr *read* Tirunālūr and *insert* after it, [=Tirunallūr].
„ „ „ 33.—*For* Śeranai° *read* Śēranai°.
„ „ „ 34.—*For* °ma-nallūr *read* °mā-nalūr.
„ „ „ 35.—*For* Śunepuha° *read* Śunaipuha°.
„ „ Text, l. 1.—Remove the unnecessary extra bracket after नम(:) and insert a hyphen at the end of the line.
„ „ „ 2.—*For* चु *read* चं.
„ 113 „ 3.—*For* सं *read* सं and cancel foot-note.
„ „ „ 6.—*For* °मंभुधि° *read* मंभुधि°.
„ „ „ 8.—*For* °यद्र *read* °यद्°.
„ „ „ 14.—*For* °ह्राविहरि° *read* °ह्रावी हरि°.
„ „ „ 23.—*For* °जन्म त° *read* °जन्मत°.
„ „ f. n. 9.—*For* भस्मान *read* भस्मानं.
„ 114, Text l. 29.—*For* मुक° *read* मर्क° and *add* in a footnote "[र्‍ is the letter ṛa as generally transcribed in Nāgarī,—Ed.]"
„ „ „ „ 31.—*For* °ह्रये *read* °ह्हये and correct into °ह्रये.
„ „ „ „ 34.—*For* मासि *read* नासा and correct into मासि.
„ „ „ „ 36.—*Insert* after °[श्री] the letter 'द' and correct °[राश्री]द into °रा[श्री]थ.
„ „ „ „ 37.—Carry the footnote number 14 to °भो of the preceding word.
„ „ „ „ „ —*For* तिरुनलु° *read* तिरुनलु° and correct into तिरुनालु.
„ „ „ „ 38.—Correct in a foot-note °नलूरपि into °नलूरपि. *Insert* space after उत्तरे and *for* °कंन्या° *read* °कंन्य°.
„ „ „ „ 39.—*Insert* " [|| 23*] " after °थे and *add* a foot-note " read वलाभिधे [वळाभिधे]. [This word which occurs in connection with Rājagambhīra and Rājarāja, both in lines 36 and 38 f, has perhaps to be understood in the sense of the Tamil वळनाडु, a territorial subdivision, as suggested also by its use below, in ll. 52 and 56 f.—Ed.]"
„ „ „ „ „ —*Insert* as a foot-note on प्रळजपदे:—"[प्रळजपदे perhaps stands for प्राक्‌ळजनपदे which is perhaps a Sanskritised form of Maḷanāḍu.—Ed.]"
„ „ „ „ „ —*Correct* सुनेपुहनलूरत्वा *into* सुनैपुहनलूरथो in a foot-note.
„ „ „ „ „ —*Insert* after जमौ " [|*]."
„ „ „ „ 40.—Read श्रीरंगराजश्रपरि as one word.
„ „ „ „ 41.—After " || " insert [24*].
„ „ „ „ „ —*For* स्वस्ति श्री *read* स्व स्ति and correct the same into स्वस्ति श्री [||*].

Page 114, Text l. 42.—*Insert* a foot-note on सुघ:—"Read सुड".
" " " " 44.—*For* नारायण° *read* नारण°.
" " " " 46.—*For* परि° *read* इरि° and insert spaces after च and नै
" " " " " —*For* वगमालं *read* वनमाल.
" " " " 47.—*For* तिह° *read* तिरि° and correct into तिह. The letters दके को ought to be in [ ].
" " f. n. 9.—*Add* at the end: "[Perhaps मकथाद्दे was meant—Ed.]"
" " " 13.—*For* मिषकावेर्या *read* मिषे कावेर्या°.
" " " 14.—*Cancel* the hyphen at the end and *insert* [|| 22*]
" " " 15.—*For* सत्यकन्याया *read* सह्यकन्याया.
" " " 16 & 17.—[Perhaps metrical considerations would require some corrections like श्रीरंगराट्सपर्यार्थं नारणाख्याभिधानतः —Ed.]
" " " 25.—*For* थान्दक *read* थोंदके.
" 115, Text l. 51.—*For* सुघ *read* सुघ.
" " " " 53.—Correct in a foot-note, °होमलि° into °हौवळि°.
" " " " 54.—*Correct* तिरनालुर *into* तिरुनालुर.
" " " " 55.—*For* नलु *read* नलु and correct into नलु°.
" " " " 56.—In १४०३ put the nought in square brackets with an asterisk.
" " " " " —*For* °कर *read* °करे.
" " " " " —*For* °वळ° *read* °वम°.
" " " " 57.—*For* सुनै° *read* सुनै° and correct in a foot-note °मलुर into °मळुर.
" " " " 58.—*For* उभय(:) *read* उभरं.
" " " " 59.—*Insert* a space after कंः and *add* in a foot-note "[कंद perhaps stands for कण्ड *i. e.*, मेल्कण्ड —Ed.]"
" " " " 64.—*For* थों *read* थो and correct the whole into थोन्दुक्कमीर्प्याई in a foot-note.
" " " " 67.—Carry foot-note No. 15 to the end of एलुहंता.
" " " " 71.—*Insert* space after the first letter in the line and correct in a foot-note माचं° into थाचं°.
" " f. n. 4.—Omit मे at the end of the correction.
" " " 6.—Change the foot-note thus: "Read सेरनेवंडपेरुमानलुर as in the Sanskrit portion in l. 37."
" " " 9.—*For* थान्दके *read* थोन्दके.
" " " 14.—*For* पच *read* पचं.
" " " 15.—*For* होमवपि *read* एलुहुंथा.
" 116, Text l. 75.—*For* 22 *read* 25 and *for* .स्वदत्ता *read* स्वादत्ता and correct into स्वदत्ता
" " " " 76.—*For* षष्टिवर्षं° *read* षष्टिर्वर्षु° and correct into षष्टिं वर्ष°.
" " " " 77.—*For* 23 *read* 26.
" " " " 79.—*For* 24 *read* 27.
" " " " 80.—*For* दत्ता° *read* दत्ता and correct into दत्ता°.
" " " " 82.—*For* °ना° *read* °ना°.
" " " " " —*For* 26 *read* 29.
" " " " 83.—*For* °विक° *read* °विक °and correct into °विक°.
" " Vv. 6-7.—For *kaustabha* read *kaustubha*.
" " " 10-12, last sentence.—*For* °Lakshmī *read* -Śrī and *for* as *read* the.

Page 116, line 3 from the bottom.—*For* Ṣēra°- *read* Sēra°.
„ „ „ „ „ „ .—*For* Śune° *read* Sunai°.
„ „ last line.—*For* Monday *read* Sunday.
„ „ f. n. 3.—Insert 'and' *before* इखाणि.
„ „ „ 6.—*Insert* मा *before* हि.
„ „ „ 7.—*Insert* दत्ताप *before* खारेण.
„ „ „ 8.—*Cancel* °पखारेण.
„ 117, l. 3.—*For* Sēranaibeṇḍa-° *read* Sēranaibaṇḍa-°
„ „ „ 4.—*For* Triśirāppalli *read* Tiruchchirāpalli.
„ „ „ 6.—*Insert* Sahyakanyā *before* Kāvērī and put the latter in round brackets and *add* "in the Prāvṛidjanapada *i.e.*, in the Maḷa-nāḍu district".
„ „ para. 2, l. 3.—*Insert* at the end of the line "sacred food, of one".
„ „ „ „ „ 4.—*For* lamps *read* lamp and *insert* 'one' after the comma.
„ „ „ „ „ 4.—*For* garlands *read* garland.
„ „ „ „ „ 5.—*For* Nārāyaṇa° *read* Nāraṇa°.
„ „ „ „ „ 5.—*Insert* after Pāṇḍamaṅgalam "with its hamlets."
„ „ „ „ „ 6.—*For* Sune° *read* Sunai°
„ „ „ „ „ 11.—*For* Chirichrapalli *read* Tiruchchirāpalli.
„ „ „ „ „ 11.—*For* Sune° *read* Sunai°.
„ „ „ „ „ 12.—*For* Mēlamugi *read* Mēlemuri.
„ „ „ „ „ 12.—Maḷa *read* Maḷa.
„ „ „ „ „ 17.—*Cancel* tarikkaḍamai at the end of the line.
„ „ „ „ „ 18.—For *āḷukunipāṭṭam*, *read* oḷukkunīrpāṭṭam.
„ „ „ „ „ 18.—*For* verses 22-26 *read* verses 25-29.
„ 118, text lls. 5 & 6.—I would add a hyphen at the end of l. 5 and take *mahōdaya* — *mahīdharēndra* as one word, thus altering the sense. The chief who is described was a Sun on the Lord of mountains, *viz.*, the great eminence of the Kadamba family.—Ed.
„ 130, l. 40, *for* XIV *read* XVI.
„ 150, coll. 6-7 for *Śōchana* read *Śōbhana*.
„ 189, „ 29, *for* nāme *read* namo.
„ 191, f. n. 3, *for* the letter व् after य (?) *read* न after न्न.
„ „ „ 12, *insert* length after °ञ°.
„ 193, l. 22, *for* Tōramāna *read* Tōramāṇa.
„ 194, para. 5, l. 4, *for* Karnāṭa *read* Karṇāṭa.
„ 196, „ 2, „ 13, *for* Śiddhaladēvī *read* Śiddaladēvī.
„ „ „ 3, „ 2, *for* Kārttiga *read* Kārttika.
„ 197, „ 1, „ 2, *for* Hastināvati- *read* Hastināvatī-.
„ „ „ 3, „ 1, *for* Durga-Bhaṭṭa *read* Durgā-Bhaṭṭa.
„ „ f. n. 4, *for* °ड्ड° *read* °ड्ड°.

Page 198, text l. 12, *for* सगम. *read* संगम:.

„ 200, f. n 8 *for* श्राव: *read* श्राव ; *for* see above, note 1 *read* see above, note 7.

„ 203, trans. of v. 9. *for* Udaiya- *read* Udaya-

„ 204. l. 8, *for* kère *read* kere.

„ „ l. 21, *delete* who received.

„ 291, 4th line from the bottom, *insert* the word "*after*" after "and" in brackets.

„ 292, l. 5, for *kkoḷīya* read *kkoḷīiya*.

„ 293, l. 27, *omit* n of Kaḷabhran.

„ „ f. n. 4, last line, *for* Saḍaiyaṉ *read* Śaḍaiyaṉ.

„ 294, l. 35, *insert* after orator: "thus making it clear that Mangalarāja Madhuratara is identical with Madavikalaṉ Mārangāri mentioned in the previous paragraph".

„ „ l. 38, *insert* after certain: "Śuttakēśari-pPerumpaṇaikkāraṉ. The document was signed by"; and after Perumbaṇaikkāraṉ "who seems to be identical with the engraver Śuttakēśari-pPerumbaṇaikkāraṉ"

„ 295, l. 10, *for* Kaḍuṅgōn *read* Kaḍuṅgōṉ.

„ „ l. 22, for *Maduratara* read *Madhuratara*.

„ „ l. 27, *for* grove *read* drove.

„ „ f. n., for *Epigraphia Indica* read *S. I. I., Vol. III, Pt. IV.*

„ 296, l. 2, *for* inscriptions *read* inscription.

„ 297, l. 29, *for* Maḷava *read* Malava.

„ „ l. 33, *for* Kurumadai *read* Kuṟumaḍai.

„ „ f. n. 3, *for* °-Vaḷanāḍu *read* °-vaḷanāḍu.

„ 308, l. 15, *insert* "(?)" *after* Kuṟumbunāḍu.

„ „ l. 36, *for* Kuḷaudevaṉ *read* Kuḷandaivaṉ.

„ 309, l. 6, *for* race *read* people and *omit* °ttavar of Karavandapurattavar.

„ „ trans. of v. 19, *remove* the brackets of (*learned*) and *use* roman type.

„ „ trans. of l. 152, *for* °-pPerumbāṇaikkāraṉ *read* °-pPerumbaṇaikkāraṉ.

„ „ f. n. 1, *for* Pāṇḍya *read* Pāṇḍya.

„ 311, l. 11, *omit* 'made through an ambassador,'

„ „ l. 17, *for* Rajagṛiha *read* Rājagṛiha.

„ „ para. 2, 4th line from end, *for* Kalāsan *read* Kalasan.

„ 312, l. 11, from end, *for* Prambanam *read* Prambanan.

„ 313, l. 6, *for* extending *read* governing.

„ „ l. 6, from bottom, for a *dūtaka* or ambassador read *dūtas* or ambassadors.

„ „ f. n. 5, *for* Sailēndras *read* Śailēndras.

„ 314, l. 7, *for* Kalāsan *read* Kalasan.

„ 315, l. 14, *for* Kuṇḍinga *read* Kuṇḍiṅga.

„ 317, l. 26, *insert* -naya *after* Pilipiṇkā.

„ 317, f. n. 6, *after* 'document.' at the end, *add* "That Nagara by itself was used as a synonym of Kusumapura or Pāṭaliputra is evidenced by the *Dhūrtaviṭasaṁvāda* of Iśvaradatta (pp. 3 f.) published in the Chaturbhāṇī in 1922 by Mr. M. Ramakrishna Kavi, M.A., Teacher's College, Rajahmundry.

Page 320, text l. 24, *for* °समावासि° *read* °समावासित°.

„ 321, f. n. 2, for *uparik*, read *uparika.*

„ 323, text l. 57, *for* °तोषणगं° *read* तोषणैंगं°; *for* ग्रमकं° one should expect ग्रमकैं; or the poet might have used ग्रमक as a derivative of ग्रम treating it as a stem like मोचक from मोच; and *for* °१° *read* °१°.

„ 324, f. n. 1, *for* Sakti *read* Śakti (twice).

„ 325 l. 9, for *-mahishydhikṛita* read *-mahishyadhikṛita.*

„ „ l. 13, *for* Brahmaṇōttaras, *read* Brāhmaṇōttaras.

„ „ l. 14, for *Chāṇḍālas* read *Chaṇḍālas.*

„ 328, l. 18, for *-Hiranyagarbha-* read *-Hiraṇyagarbha-.*

„ „ l. 28 beginning, *for* gf *read* of.

„ 335, l. 13, *for* Guddādi- *read* Guddādi.

EPIGRAPHIA INDICA

VOLUME XVII

No. 1.—GUDIMALLAM PLATES OF THE BANA KING VIKRAMADITYA II.

By Professor E. Hultzsch, Ph.D.; Halle (Saale).

These plates were found at **Guḍimallam** in the **Kâlahasti** Zamîndârî, and were forwarded to Rao Bahadur H. Krishna Sastri by Mr. K. Raghaviah of Kâlahasti. They have been acquired for the Government Central Museum, Madras.

The **copper-plates** are **five** in number and have nine faces of writing, the outer side of the first plate being left blank. The plates are not raised into rims for the protection of the writing, which is, however, in good preservation. They measure 7¼″ in length and 3¾″ in breadth, and are strung on a copper ring, which measures about 2¾″ in diameter, and the two ends of which are fixed in a circular seal. The hole through which the ring is passed was enlarged after the inscription had been already engraved. This led to the total or partial destruction of some letters, a few of which were subsequently engraved a second time below the ring-hole. The **seal** bears, in relief, the figure of a bull couchant, facing the proper right, and above it what looks like a lamp-stand and a crescent. The weight of the plates with ring and seal is 133 *tōlās*.

The **alphabet** is old Grantha (ll. 1-53) and old Tamiḻ (l. 53 f.). In the Grantha portion the superscribed *ī* is not always distinguished from *i*, nor the subscribed form of *ṛi* from that of *r*. Final forms of *m* occur in lines 3, 7, 35, 48, 49, 53. In *-dhṛik* (l. 30), *chēt* (l. 37), and *°vān* (ll. 26, 29, 47) the Virâma is expressed by a small dash at the right of the final consonant.

The Grantha portion consists of **Sanskrit** prose (ll. 1, 14, 33, 37-47, 51-53) and of 22 verses in the Anushṭubh and Âryâ metres. Both the language and the metre of some of the Âryâ verses are incorrect. In the footnotes on the text I have suggested a few possible emendations, but am unable to furnish a fully satisfactory text and translation of the eight opening verses, which are addressed to Śiva. The remainder of the inscription is quite intelligible, but the wording of it is not always correct. The compounds *-nām-ākhya* (l. 23), *-ākhya-nāmaka* (l. 35), and *kidṛig-vidha* (l. 37) are tautological. In lines 37-39 the author violates the rules of composition by comparing words in the dative plural to nominatives singular; cf. *Sāhityadarpaṇa*, Translation, p. 301, j. In line 50 the neuter *yuga* is used as a masculine, and in line 53 the neuter *likhitam* forms the predicate of the feminine *praśastiḥ* (l. 52). The record ends with a short postscript in the **Tamiḻ** language.

As regards **orthography,** *au* is expressed by *ō* in *=sō* (l. 10) and *mōli* (l. 12). The group *ksh* is replaced throughout by *tsh*, *dm* by *tm* in *patma* (ll. 4, 37), *dh* by *th* in *narāthipa* (l. 24), and perhaps *ddh* by *tth* in lines 5, 10, 11. The lingual *ḷ* is used in *yaḷa* (l. 2). The

rules of Sandhi are neglected in *Nandivarmmā iti* (l. 19), *nriparāt=bhuja-* and *prādāt-grāman-* (l. 34), *chēt* (l. 37), and *°bhyaḥ* (ll. 39, 42 (twice), 52). In *-nipuṇaḥsh=shaḍguṇē* (l. 30) and in four other cases (ll. 38, 40, 41 (twice)) final Visarga is expressed both by its original form and by a sibilant. Consonants are doubled throughout after *r*, and before *y* and *r* in *-maddhyā* (l. 2), *-viddhyud-* (l. 3), *-viddrā(ddru)ma-* (l. 3), *-māttraś=* (l. 5), *Ruddrō* (l. 9), *Girittrēṇa* (l. 33), and *pittrē* (l. 35), but not in *traividya* (l. 41), *tsha(ksha)tra* (l. 23), *putrēṇa* (l. 32), *vēda-traya* (l. 39), and *vikrama* (passim). The superscribed *r* of double consonants is often omitted through carelessness.

After lengthy invocations of Śiva, which have already been noticed in the preceding remarks, the inscription introduces the demon king **Bali** (v. 9), who is stated to have been the son of Virōchana, and to have granted the earth at a sacrifice to Kṛishṇa (*i.e.* to Vishṇu in his incarnation as a dwarf). One of Bali's descendants was king **Nandivarman** (v. 10 f.). His son was **Vijayāditya** (v. 12), his son **Malla-dēva of the Bāṇa race** (v. 13), his son **Jayamēru** (v. 14) *alias* **Vikramāditya** (v. 15), his son **Vijayāditya** (vv. 16, 20, and l. 44) *alias* **Prabhumēru** (vv. 17, 21), and his son **Vikramāditya** (v. 20 and l. 44) or **Vikramādityavarman** (v. 18).

According to verse 19 a king named **Nanda**[1] (who may be meant for the Nandivarman of verse 10 f.) had granted to Brāhmaṇas the village called **Viprapīṭha**. With the sanction of his father (v. 20 and l. 45) Vijayāditya's son Vikramāditya granted protection (*rakshā*), *i.e.* a confirmation of the former grant, to the Brāhmaṇas of this village (l. 45), because he had obtained a boon from the god of the **Paraśurāmēśvara** temple (l. 43). In verse 21 f. the donor, Prabhumēru's son, requests future kings to protect his grant. Lines 50-53 record the names of the composer and of the writer of this eulogy (*praśasti*). A postscript in Tamil states that the revenue assessment (*puram*) of the village amounted to 500 *kāḍi* of paddy and 10 (*kaḻañju* of) gold (l. 53 f.).

Before discussing the historical information which is supplied by this inscription, I may state that **Viprapīṭha** (v. 19 and l. 45) is clearly a Sanskrit equivalent of **Tiruvippirambēḍu,** the ancient name of **Guḍimallam,**[2] where the temple of **Paraśurāmēśvara** (l. 43) exists to the present day.

When my late friend Venkayya wrote his learned article on five Bāṇa inscriptions at Guḍimallam, which was destined to remain his last contribution to the *Epigraphia Indica* (above, Vol. XI, pp. 222 ff.), no other genealogical inscription of the Bāṇa dynasty was available but the **Udayēndiram** plates published by Kielhorn (above, Vol. III, p. 74 ff.). From the new plates we now learn that the king **Prabhumēru** of the Udayēndiram plates had also the name **Vijayāditya,** and that his father, who is called **Bāṇavidyādhara** in the Udayēndiram plates, had the two additional names **Vikramāditya** and **Jayamēru**. These fresh facts may be used for locating in the genealogical tree a few Bāṇa kings who are referred to in other inscriptions. A *vīragal* which was published by Mr. Rice[3] belongs to the reign of Vikramāditya-Jayamēru *alias* Bāṇavijyā(dyā)dhara, and mentions a military commander Prabhumēru who may be identified with his son and successor Vijayāditya-Prabhumēru. Inscriptions both of Vikramāditya-Jayamēru *alias* Bāṇavidyādhara and of Vijayāditya-Prabhumēru exist also

[1] An early Rāshṭrakūṭa king Nandarāja is supposed to be mentioned in the Multāī plates of Śaka 631 (*Ind. Ant.*, Vol. XVIII, p. 234); but the actual reading of the plate (l. 9) seems to be नंन्नराज. In the Tiwarkhēḍ plates of the same king (above, Vol. XI, p. 279) the reading is distinctly नन्नराज. The genealogy of this Nannarāja is the same as in the Multāī plates of Śaka 631, but the date of the Tiwarkhēḍ plates is Śaka 553, which would mean that Nannarāja reigned at least 78 years (!).

[2] See Venkayya's remarks, above, Vol. XI, p. 222.

[3] *Ind. Ant.*, Vol. X, p. 39, No. II, and *Ep. Carn.*, Vol. X, Śrīnivāspur Tāluk, No. 6.

in the Puṅganūr **Zamīndārī** of the North Arcot District.[1] One of Venkayya's Guḍimallam inscriptions[2] contains a **Śaka** date—**820**—which must be assigned to the reign of Vijayāditya-Prabhumēru, because it calls the Bāṇa king **Vijayāditya,** to whose reign it belongs, the son of a queen of **Bāṇavidyādhara,** *i.e.* of Vikramāditya-Jayamēru. Another queen of Bāṇavidyādhara, named **Kundavvai,** was the daughter of **Pratipati-Araiyar,** *i.e.* of the Gaṅga king Pṛithivīpati I,[3] who was a contemporary of the Rāshṭrakūṭa king Amōghavarsha I[4] and of the Pāṇḍya king Varaguṇa.[5] Two further inscriptions of Vijayāditya (Prabhumēru) furnish the **Śaka** dates **827** and **831.**[6]

According to the Udayēndiram plates, Prabhumēru's great-grandson, **Vikramāditya-Vijayabāhu,** was a friend of **Kṛishṇa-Rāja,** who used to be identified with the Rāshṭrakūṭa king Kṛishṇa II (about A.D. 900). This identification cannot be upheld, because we have now for Prabhumēru Śaka dates ranging about A.D. 900, but Vijayabāhu's friend Kṛishṇa-Rāja must have been the Rāshṭrakūṭa king **Kṛishṇa III** (about A.D. 950), of whom we know from other sources that he made and held extensive conquests in the South. The Gaṅga prince **Pṛithivīpati II** Hastimalla, who received the title *Bāṇādhirāja* from the Chōḷa king **Parāntaka I,**[7] and whose inscriptions are dated in the 9th and 15th years of the same king[8] (*i.e.* A.D. 915 and 921), would thus have been a temporary usurper and a predecessor of Vikramāditya-Vijayabāhu. He was the Chōḷa king's candidate for the Bāṇa throne, while the legitimate ruler Vijayabāhu was the *protégé* of the Rāshṭrakūṭa invader. To facilitate reference, I subjoin a tabular statement of the two Bāṇa genealogies.

Guḍimallam plates.	Udayēndiram plates.	REMARKS.
Nandivarman.	Jaya-Nandivarman.	
Vijayāditya (I).	Vijayāditya (I).	
Malla-dēva.	Malla-dēva.	
Vikramāditya (I) Jayamēru.	Bāṇavidyādhara.	Son-in-law of the Gaṅga Pṛithivīpati I, who was an adversary of the Pāṇḍya Varaguṇa and of the Rāshṭrakūṭa Amōghavarsha I.
Vijayāditya (II) Prabhumēru.	Prabhumēru.	Inscriptions dated in Śaka 820, 827, 831.
Vikramāditya (II) (heir-apparent).	Vikramāditya (II).	
	Vijayāditya (III) Pugaḻvippavargaṇḍa.	
	Vikramāditya (III) Vijayabāhu.	Friend of the Rāshṭrakūṭa Kṛishṇa III.

[1] See above, Vol. XI, p. 235.
[2] *Ibid.*, pp. 227 f.
[3] In his Annual Report for 1908-09, p. 13, Mr. R. Narasimhachar has suggested that the actual name of this chief may have been Diṇḍika.
[4] *South-Ind. Inscr.*, Vol. III, Nos. 47 and 48.
[5] See above, Vol. IX, p. 87.
[6] Above, Vol. XI, p. 228, and *Ep. Carn.*, Vol. X, Muḷbāgal Tāluk, No. 229.
[7] Above, Vol. IV, p. 225, verse 5.
[8] *Ibid.*, p. 224, and *South-Ind. Inscr.*, Vol. II, p. 389.

TEXT.[1]

First Plate ; Second Side.

1 Namaś=Śivāya svasti || Jayati sa sarvva-vyāpī yat-kṛita-pa-
2 riṇaddha-kandharā-maddhyō [|*] gaḷa-bhūshaṇ-āhi-[2]pratibimbam=iva su-
3 ra-dahana-visham || [1*] Jayati hutāśana-viddyud-viddrā(ddru)ma-saṁghāta-ni-
4 bha-jaṭā-bhāraḥ [|*] yach-chhirasi maṇi-jaṭā-[bh]ā-rakta-sarit=patma(dma)-māl=ē-
5 va || [2*] Jayati praṇavapyātthō[3] lēkhā-māttraś=śikhā-śaśī yasya [|*] dṛi-
6 ḍha-nahana-khinna-vishadhara-van-ānala-dagdha iva latshyaḥ(kshyaḥ) || [3*]

Second Plate ; First Side.

7 Jayaty=abdhara-saṁkāśa-kandharañ=ch=āhi-kuṇḍalam [|*] lalāṭ-ētsha(ksha)ṇam=Ākāśasa-
8 r[i]n-mālā-dharaṁ vapuḥ || [4*] Jayati vṛish-ēśō dēvō lalāṭa-nayan-āgni-
9 niva(pa)tit-Ānaṁgaḥ [|*] asura-pur-āri(rī) Ruddrō jagad-udaya-layaṁkarō bhīmaḥ || [5*]
10 Jayati sa-nād-ātthō=sō[4] śakti-dvaya-[5]guṇ-ākarō vibhu-
11 ś=Śambhuḥ [|] saṁvṛita-mantr-ārtth-ārtthaś=[6]śabd-ādi-guṇair=anupalabhyaḥ || [6*]
12 Jayati jaṭā-dhara-mō(mau)lir=Mmandākinī-pūrita-[7]mahā-makuṭ-ēśaḥ [|*] Śi(Gi)-
13 ritanay-ārppita-bhāgō guṇa . . rahitō[8] vibhu[r*]=vvyāpiḥ(pī) || [7*]

Second Plate ; Second Side.

14 Namaś-Śivāya svastī(sti) śrī [||*] Jayati sa Kām-āṁga-dahanō[9]
15 mastaka-nyasta-mugdh-ēnduḥ [|*] k-ādī(di)-triṇ-āntasy=ēśō[10] gupty-u-
16 tpatti-laya-hētuḥ [||] [8*] **Bali[r*]=Vvairōchanō**[11] nāma Dāna-
17 v-ēndrō mahā-balaḥ [|*] prādāt=sa gām=makha-varē Kṛishṇāy=āmi-
18 ta-tējasēḥ[12] [||] [9*] Tasy=ānvayē samu[d]bhūtaḥ pṛithivi(vī)pāla-sa-
19 ttamaḥ [|*] **Nandivarmm[ā]** iti[13] khyātaḥ praśaṁsita-mahā-balaḥ || [10*]

Third Plate ; First Side.

20 Jayati[14] sa **Nandiva[r]mmā** narapati-maṇi-makuṭa-li(lī)ḍha-pāda-
21 yugaḥ [|] tēna nirākṛita-kalinā samprati rājanvati(tī) pṛithi-
22 vi[ḥ][15] || [11*] Tasya sūnur mmahā-vīrō vēlā-paryyanta-dīpakaḥ [|*] **Vi-**
23 **jayāditya**-nām-ākhyō dharmma-tsha(ksha)trabhṛitāṁ varaḥ || [12*] Tasy=ābhava-
24 n=mahā-bāhur **Mmalla-dēvō** narāthi(dhi)paḥ [|*] **Bāṇa-vaṁśasya** tilaka-
25 s=samasta-vasudh-ādhipaḥ [||] [13*] Tasya jajñō mahā-śūrō **Ja-**

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[1] From two sets of ink-impressions supplied by Rao Bahadur H. Krishna Sastri.

[2] For the sake of the metre, a word like *bhōga-* may have to be inserted after *-āhi-*.

[3] Read perhaps *praṇavasy=ārddhō*.

[4] Read perhaps °*dā-rddhō*[or *rttho* ?—F. W. T.]=*sau*.

[5] For the sake of the metre, *śakty-arddha-* may have to be read.

[6] Read perhaps *-ārddhaś=*.

[7] For the sake of the metre, *-pūrita-* may have to be replaced by its synonym *-bhṛita-* [and perhaps *makuṭ-ēśaḥ* is for *makuṭaḥ*. But the scansion seems too irregular in many places.—F. W. T.].

[8] Read perhaps *guṇatva-rahitō* [or *guṇa-gaṇa*, since *guṇatva* is found only in *guṇas* ?—F. W. T.].

[9] The metre is wrong here.

[10] For the sake of the metre, *yō* may have to be inserted here.

[11] The second half of the *ō* of °*nō* is very faintly seen.

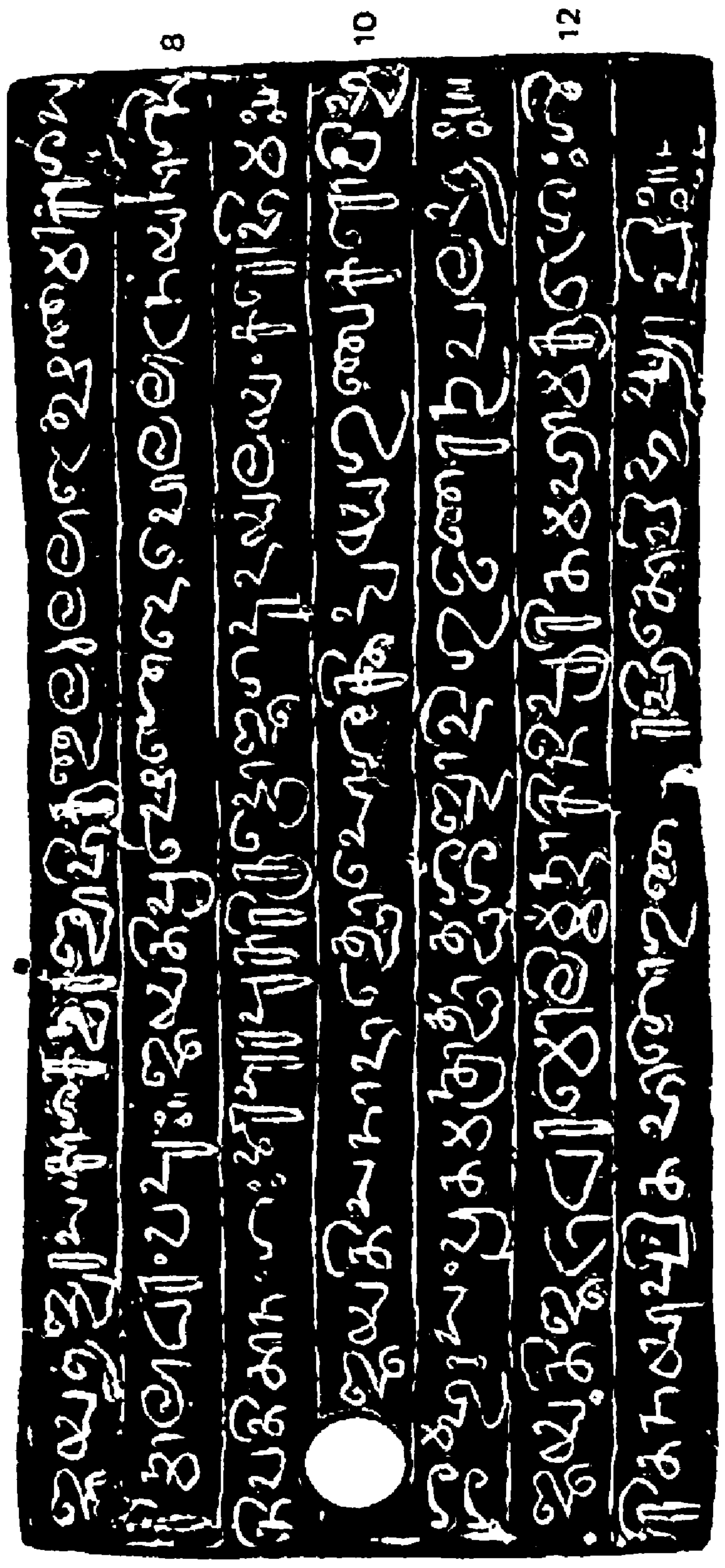
[12] Cancel the Visarga.

[13] The correct Sandhi °*varmm=ēti* is precluded by the metre.

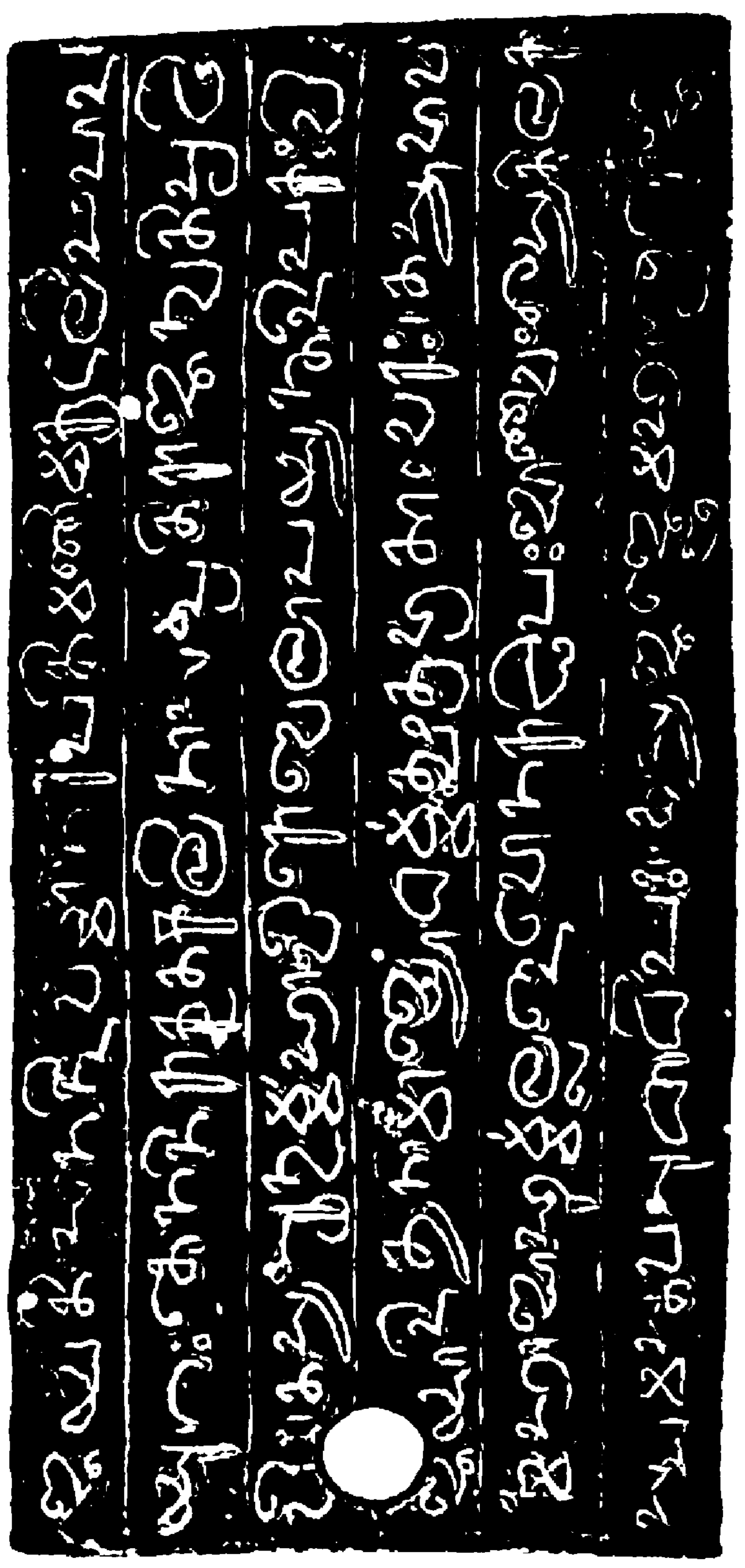
[14] Read *Vijayati* on account of the metre.

[15] Cancel the Visarga.

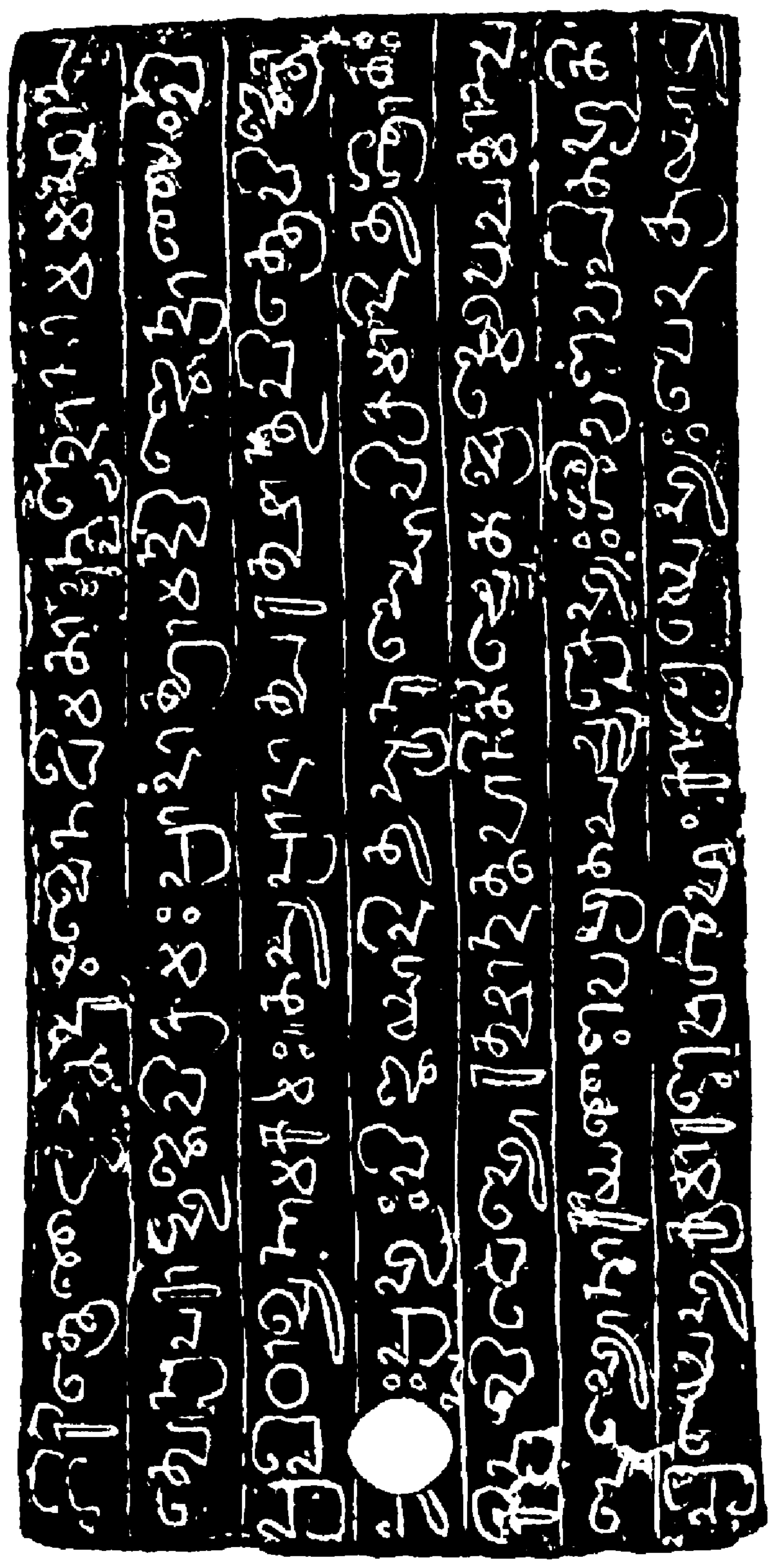
Gudimallam Plates of the Bana king Vikramaditya II.



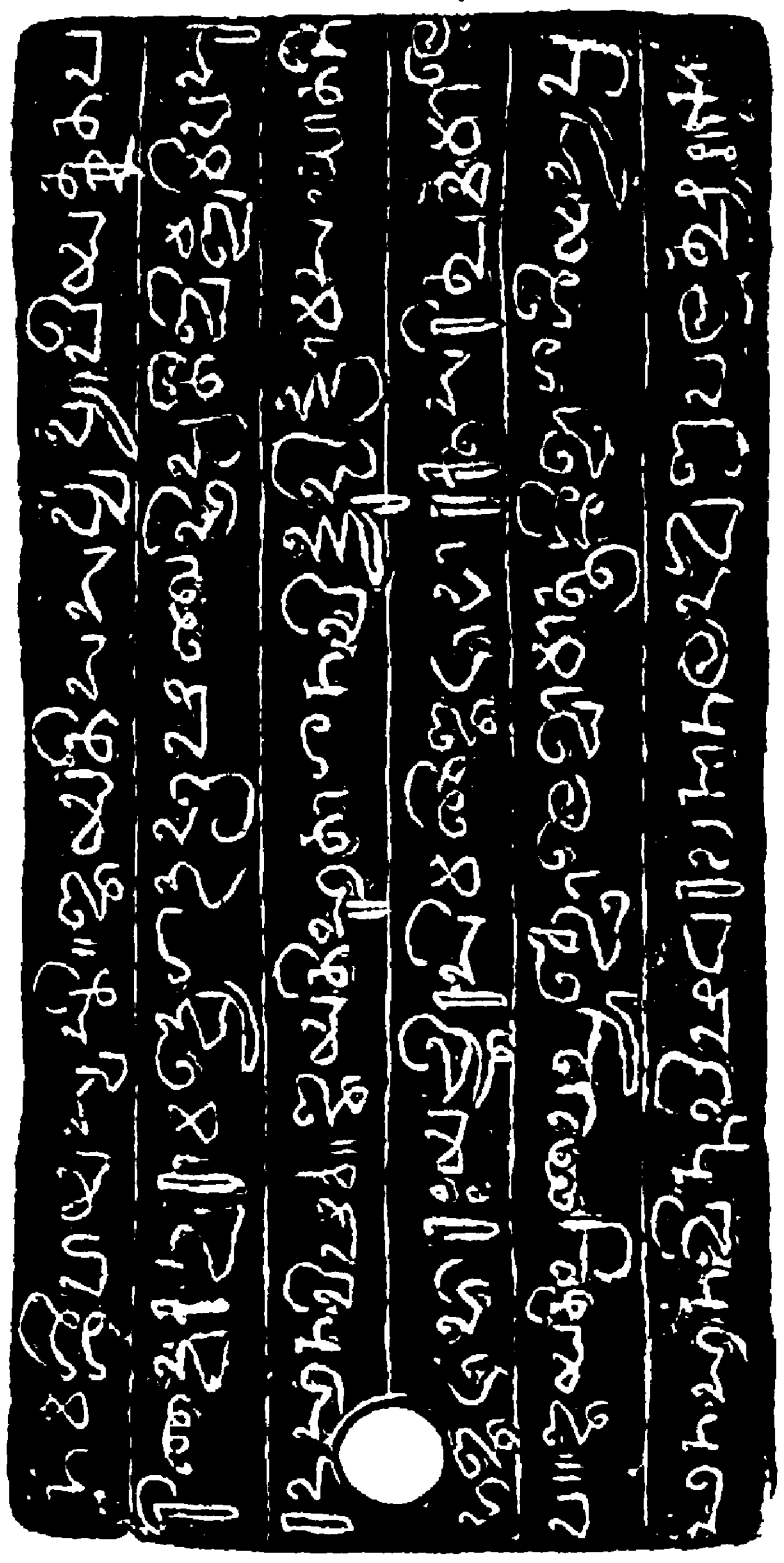
ii a.



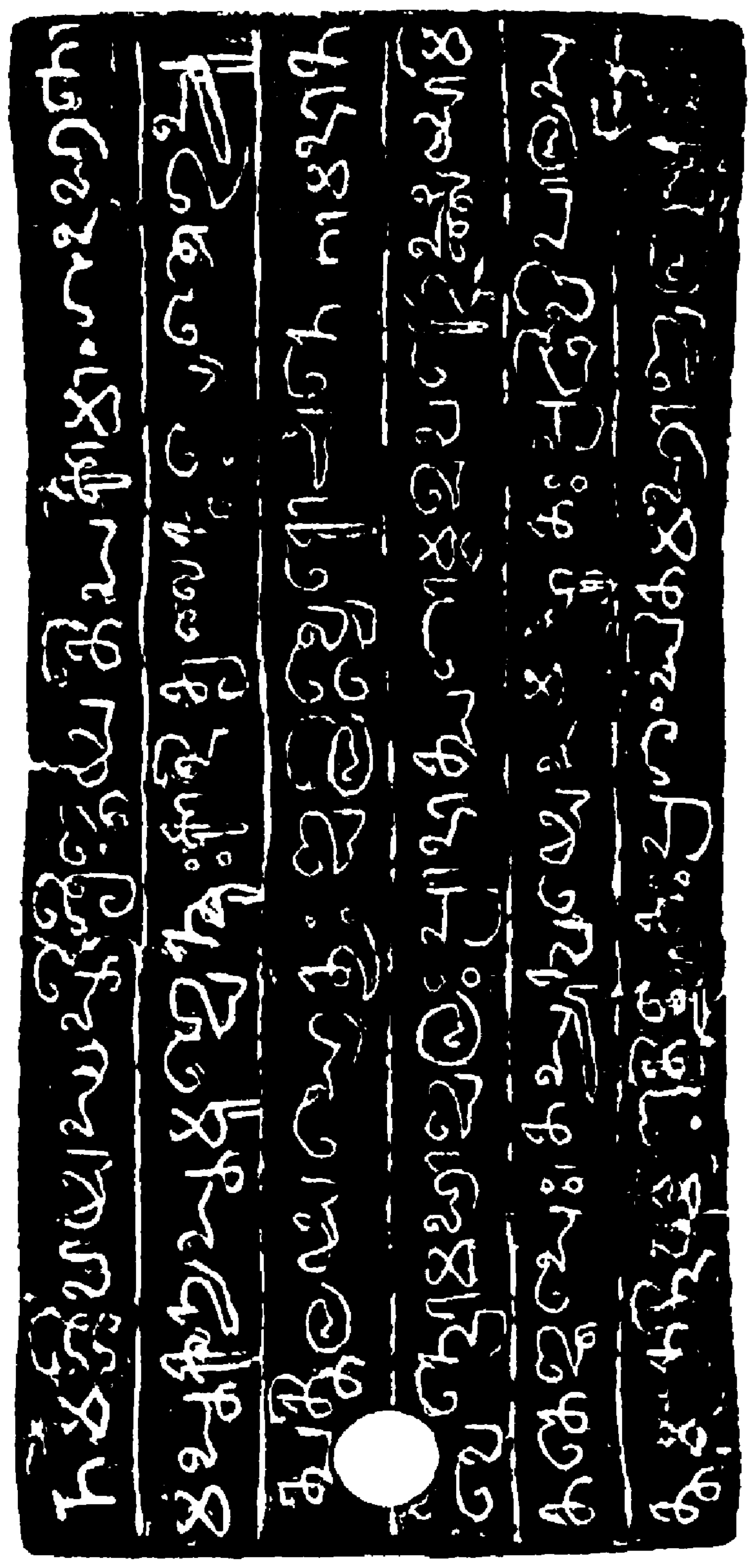
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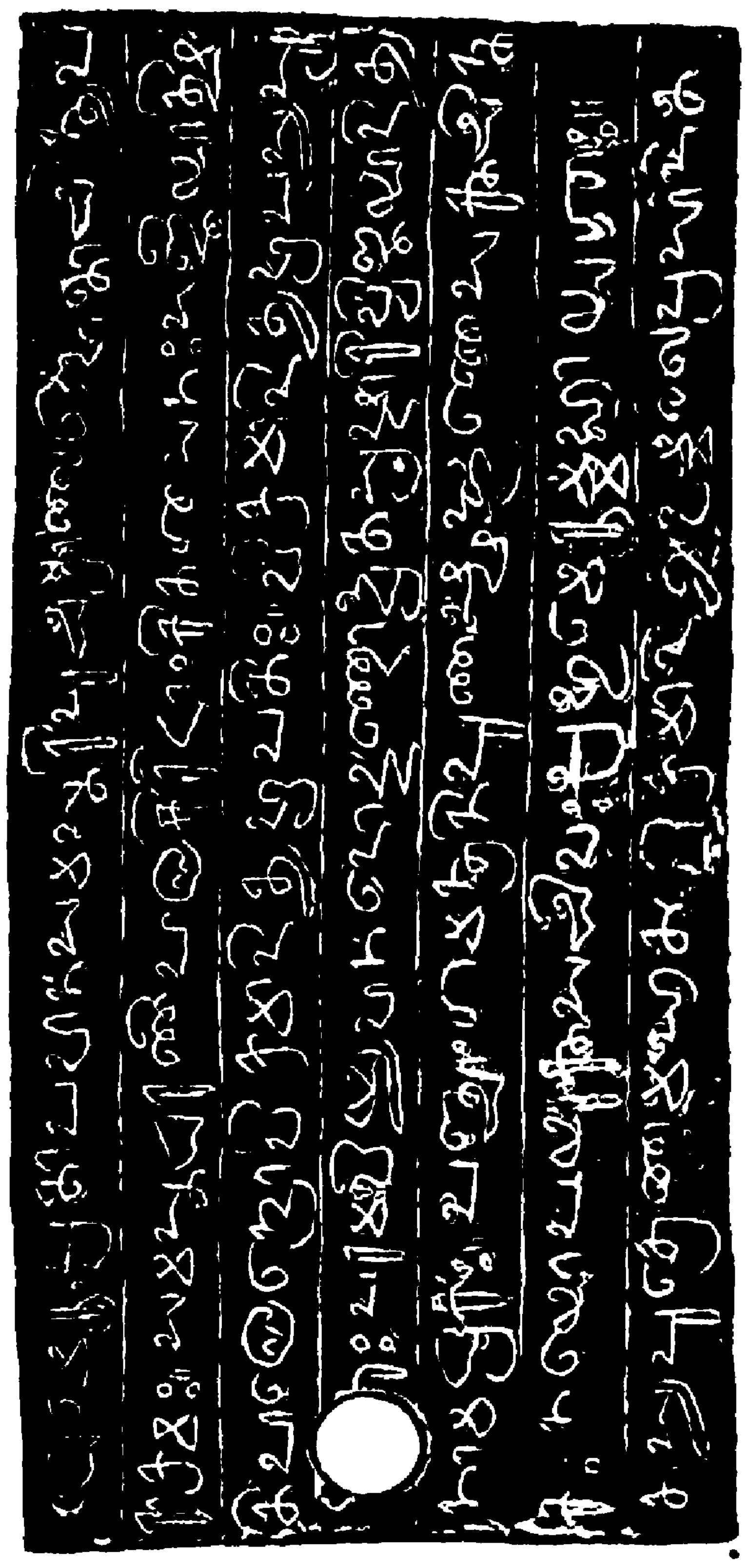
iv a.



i b.

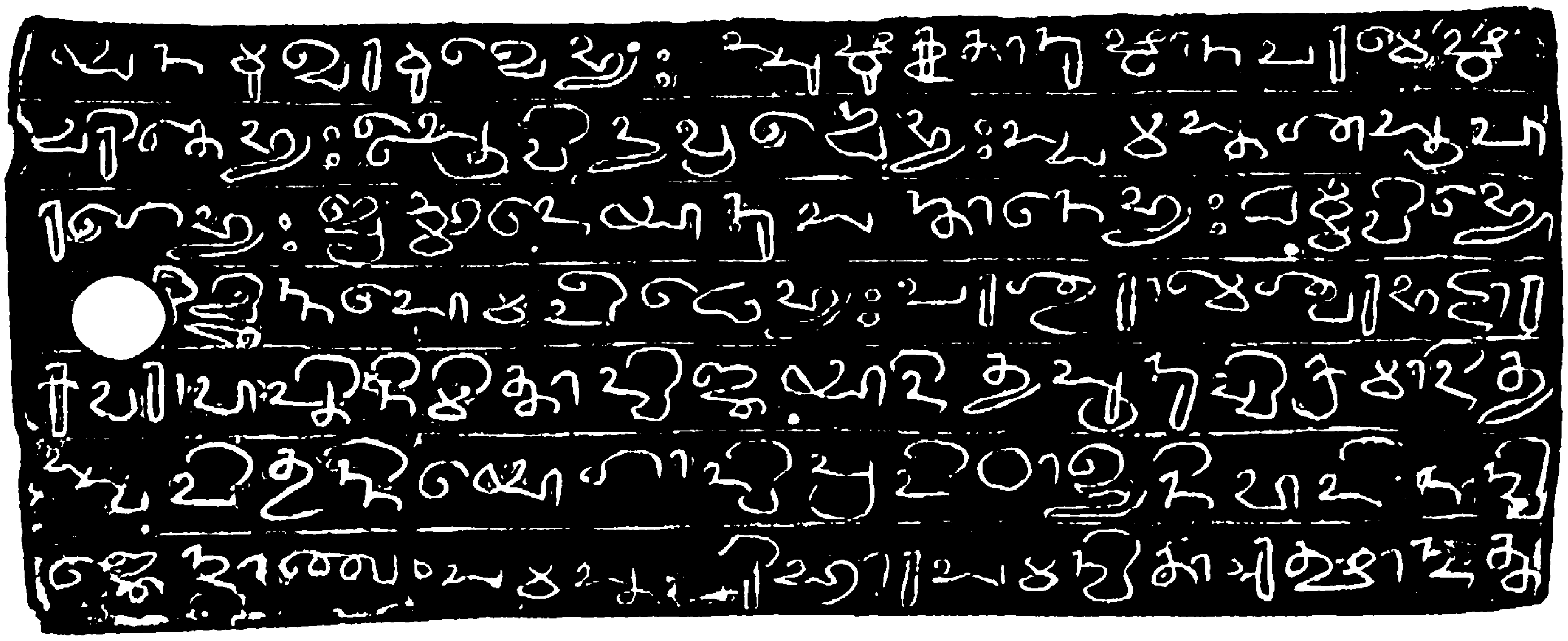


ii b.

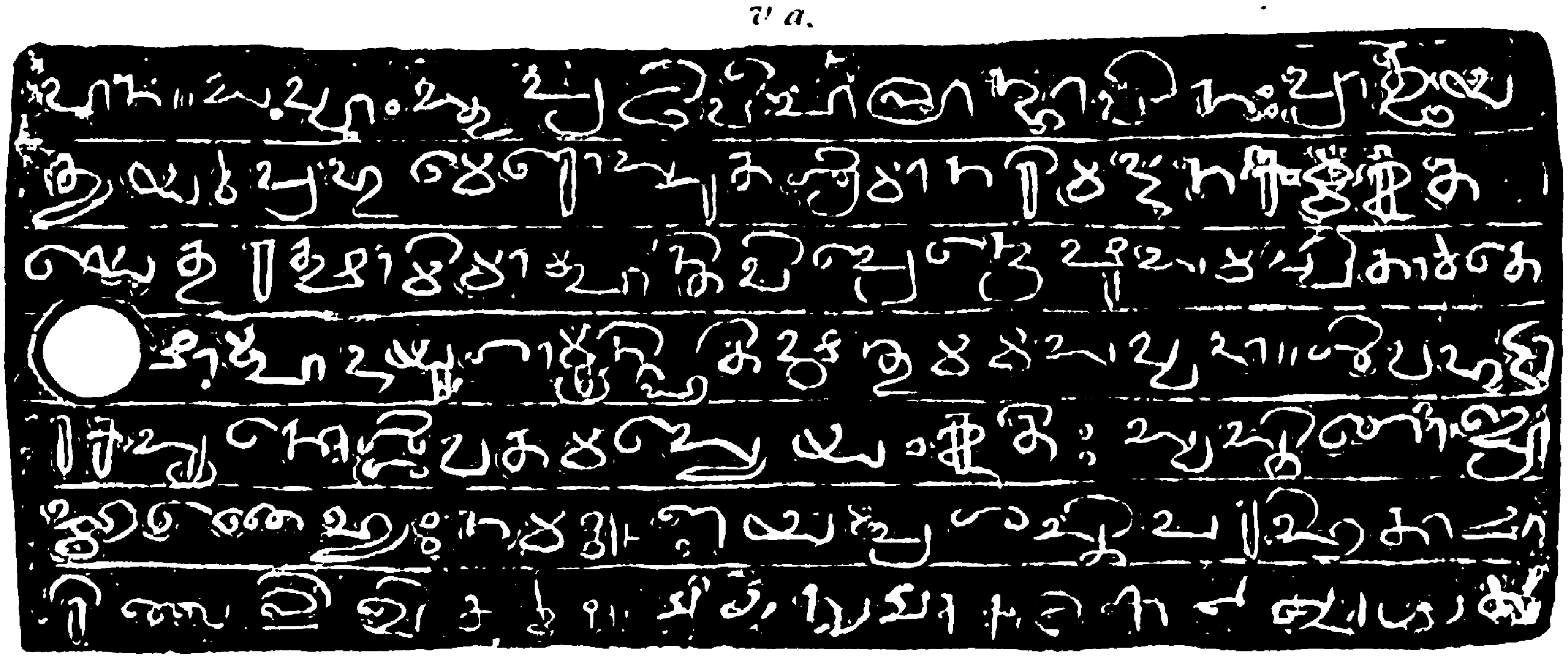


iii b.

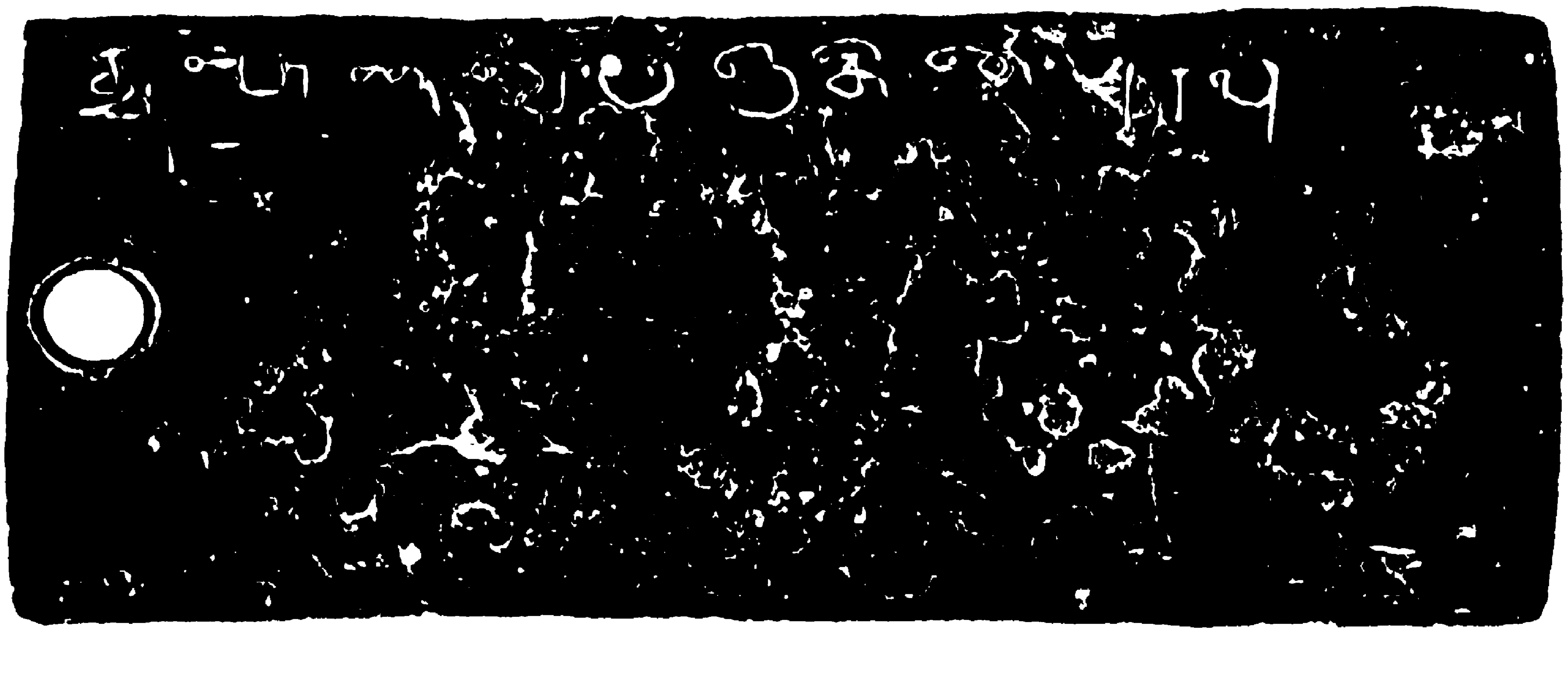
iv b.



v a.



v b.



SCALE THREE-FIFTHS

Third Plate; Second Side.

26 **yamēruḥ** pratāpavān [|*] samasta-ripu-chakrāṇām=bhētt=āchintya-pa-
27 rākramaḥ || [14*] Samasta-dharaṇīpāla-kirīṭ-āṁkita-śāsanaḥ [|*] sa jīyāt=shi(kshi)-
28 tipāl-ēndrō **Vikramāditya**-bhūpatiḥ || [15*] **Vikramāditya**-bhūpasya sū-
29 [n]uḥ parama-vīryyavān [|*] dōr-ddaṇḍ-ōddhṛita-sṛishṭ-ārir=[1]**Vvijayāditya**-
30 nāma-dhṛikḥ[2] || [16*] Pañchāṁga-mantra-nipuṇaḥsh=[2]shaḍguṇō sakta-chinta-
31 kaḥ [|*] nay-ōpayukta-sachivaḥ **Prabhumērur**=mmahā-yaśāḥ || [17*]
32 Tasya putrēṇa mahatā **Vikramādityava[r]mmaṇā** [|*] prasādita-

Fourth Plate; First Side.

33 Girittrēṇa dhvasta-duḥkhōna dhīmatā [|| 18*] Api cha[3] [||*] **Nandō** nāma mahā-sa-
34 tvō(ttvō) nṛipa-rāṭ=[4]bhuja-vikramaḥ [|*] prādāt=[5]grāman=dvij-ēndrāṇāṁ **Vi**-
35 **prapīṭh**-ākhya-nāmakamḥ[6] || [19*] Tasya prādāt=sa ratshā(kshā)n=tu pittrō vijñā-
•36 [pya] saḥ[7] prabhuḥ [|*] **Vijayāditya**-sūnus=sō[8] **Vikramādityaśśrātaḥ**[9] [|| 20*]
37 Ki(kī)dṛig-vidhōbhyō ratshā(kshā)n=dattavān=iti chōt(d=) Brahm=ōva patm(dm)-āspa-
38 dōbhyō Nārāyaṇa iva bhṛita-sach-chakrōbhyaḥś=[10]Śiva iva sita-bhūti-
39 priyēbhya[ḥ*] Kumāra iva Śiv-āṁk-āśrayōbhyaḥ(bhyō) vēda-tray-ādhya-

Fourth Plate; Second Side.

40 yana-m●khara-mukhōbhyaḥs=[10]sushṭhu-kṛit-ānushṭhāna-Paramēshṭhi-
41 charitōbhyaḥs=[10]traividya-vṛiddhōbhyaḥs=[10]samasta-śāstra-pā-
42 ragēbhyaḥ(bhyō) brahmadēy-ānusantānēbhyaḥ(bhyō) dharmma-vi[d*]bhyō=
43 [v]ichchhinna-sōmapīthōbhyaḥ [||*] **Paraśurāmēśvara**-bhaṭṭāra-
44 ka-var-āvāpti-nimittād=**Vijayāditya**-sūnu[r*]=**Vvikramāditya**-
45 **s**=sva-pitu[r*]=nniyōgād=**Viprapīṭh**-ākhya-nivāsinān=dvi-
46 j-ēndrāṇaṁ samasta-[pa]rihāra-samanvitāṁ ratshā(kshā)n=datta-

Fifth Plate; First Side.

47 vān || Sa[r*]vvāṁs=tu pṛithivīpālān=bhāvinaḥ prā[r*]tthaya-
48 ty=ayam [|*] **Prabhumērōs**=suta[ḥ*] śrīmān=ari-marddana-karmma-kṛita[11] [||] [21*]
49 Yē tu ratshā(kshā)m=imām=pānti vipr-ēndrēshu sama[r*]ppitām [|*] tē-
50 [sh]āṁ=pāda-yugā mūnni(rdhni)[12] tishṭhantu mama sa[r*]vvadā || [22*] Śiva-bhaṭṭā-
51 raka-sūnōś=Śivatamasy=ēyaṁ kṛitiḥ [||*] Svasti gō-brā-
52 hmaṇēbhyaḥ(bhyō) namaḥ || Iyam=praśasti[ḥ] Parahit-āchā-
53 riṇā likhitam[ḥ](tā) || A[yu]nuṛu=[13]kkāḍi nellu[m] pat-

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[1] Read -*dṛipt-ārir*=. [Read नृप?—F. W. T.]
[2] Cancel the Visarga.
[3] These two words are entered below the line, and the place at which they have to be inserted is marked by a cross or caret (*kākapada*); *cf.* Sir Aurel Stein's Translation of the *Rājataraṅgiṇī*, IV, 117 and note.
[4] Read -*rāḍ*=.
[5] Read *prādād*=.
[6] Cancel the Visarga.
[7] The syllable *sa* is entered below the line; read perhaps *sat-prabhuḥ*.
[8] Read perhaps *sūnur=yyō*.
[9] Read perhaps *itya-viśrutaḥ*.
[10] Cancel the Visarga.
[11] Read -*kṛit*.
[12] After this word the syllable *ha* is written below the line.
[13] Read *ainnūṛu*=.

Fifth Plate; Second Side.

54 tu poṉṉum idiṉ puravu [||*]

TRANSLATION.

(Line 1.) Obeisance to Śiva! Hail!

[Verses 1-7 are addressed to Śiva.]

(Line 14.) Obeisance to Śiva! Hail! Prosperity!

[Verse 8 is again addressed to Śiva.]

(Verse 9.) (There was) a powerful lord of demons (*Dānava*), **Bali** by name, the son of Virōchana. He presented at an excellent sacrifice the earth to **Kṛishṇa** of immeasurable lustre.[1]

(Verse 10.) In his lineage was born the best of kings, called **Nandivarman,** whose great power was praised.

(Verse 11.) Victorious is that **Nandivarman,** whose pair of feet was kissed by the diadems, (set) with jewels, of princes. Through him, who drove away (the sins of) the Kali (age), the earth is now (!) provided with a just king.

(Verse 12.) His son (was) a great hero, illuminating (the earth) as far as the coast (of the ocean), called **Vijayāditya** by name, the best of just rulers.

(Verse 13.) His (son) was the long-armed king **Malla-dēva,** the ornament **of the Bāṇa race** (and) the lord of the whole earth.

(Verse 14.) To him was born the powerful great hero **Jayamēru,** the breaker of the circle of all enemies, (and) whose valour was inconceivable.

(Verse 15.) Let that king **Vikramāditya** be victorious, the lord of princes, whose orders were marked (*i.e.* bowed to) by the diadems of all rulers of the earth!

(Verse 16.) King **Vikramāditya** had a very brave son, who bore the name **Vijayāditya,** (and) who uprooted proud enemies by (his) strong arm.

(Verse 17.) The renowned **Prabhumēru** knew the spell of five members[2]; his thoughts were occupied with the six measures of politics; (and) his ministers were employed with polity.

(Verse 18.) By his great wise son **Vikramādityavarman,** who propitiated Giritra (Śiva), (and) who removed distress, (this grant was made).

(Line 33.) Moreover:—

(Verse 19.) The noble ruler of princes, **Nanda** by name, whose arms were powerful, (had) presented to chiefs of Brāhmaṇas the village called **Viprapīṭha** by name.

(Verse 20.) But **Vijayāditya's** son, that virtuous lord who was celebrated (by the name of) **Vikramāditya,** granted a confirmation (of the former grant) to this (village), after having submitted (this matter) to (his) father.

(Line 37.) If (you ask) to what kind (of people) he granted the confirmation:—to those who were abodes of prosperity (*padmā*), as Brahmā dwells on a lotus-flower (*padma*); who supported a circle (*chakra*) of virtuous men, as Nārāyaṇa (Vishṇu) holds an excellent discus (*chakra*); who were beloved by bright welfare (*bhūti*), as Śiva is fond of white ashes (*bhūti*); who resided near (the temple of) Śiva, as Kumāra rests on Śiva's lap; whose mouths resounded with the recital of the three Vēdas; who practised in a suitable manner the conduct of

[1] *Cf.* verse 3 of the Udayēndiram plates, above, Vol. III, p. 78.

[2] *Viz.* the five syllables *namaś=Śivāya*, "obeisance to Śiva!" *Cf.* ll. 1, 14. [*Pañchāṅga-mantra* is 'counsel (consisting) of five subdivisions'; see Monier Williams s.v. *aṅga*.—H. K. S.]

Paramēshṭhin (Brahmā); who had advanced in (the study of) the three Vēdas; who had mastered all sciences; who (possessed) a series of gifts to Brāhmaṇas; who knew the (sacred) law; (and) whose draughts of Sōma were uninterrupted.

(Line 43.) Because he had obtained a boon from the god **Paraśurāmēśvara, Vijayāditya's** son **Vikramāditya** granted, at the direction of his father, the confirmation, accompanied by all exemptions (*parihāra*), to the chiefs of Brāhmaṇas residing in (the village) called **Viprapīṭha.**

(Verse 21.) But the destroyer of enemies, that glorious son of **Prabhumēru,** requests all future rulers of the earth :—

(Verse 22.) "Let there rest for ever on my head the pairs of feet of those (kings) who protect this confirmation granted to chiefs of Brāhmaṇas !"

(Line 50.) This is the composition of **Śivatama,** son of **Śiva-bhaṭṭāraka.** Hail! To cows and Brāhmaṇas obeisance! This eulogy (*praśasti*) was written by **Parahit-āchāri.**[1]

(Line 53.) The revenue assessment[2] of this (village amounted to) five hundred *kāḍi*[3] (of) paddy and ten (*kalañju* of) gold.

No. 2.—TUMBAGI INSCRIPTION OF THE REIGN OF SATYASRAYA : SAKA 926.

BY LIONEL D. BARNETT.

Tumbagi, or, as the name was anciently spelt, **Tumbige,** is a village lying in lat. 16° 34′ and long. 76° 20′, in the Muddebihāḷ *tāluka* of Bijāpūr District, and formerly was included in the Pagalaṭṭi Three-hundred. The name is given as "Toombgee" on the Indian Atlas sheet 57 and as "Tumbgi" on the Bombay Survey sheet 350. It contains a monastery known as "Polayya's Maṭh," at the well of which there is (or was) a stone inscribed with the present record. A bad copy was made by Elliot's pandit, and appears in Vol. I, fol. 17a. of the Elliot Collection (Royal Asiatic Society's copy). I now edit the text from good ink-impressions prepared for the late Dr. Fleet, which are now in the British Museum.[4]—The stone is a long narrow block, with an upper compartment in front containing **sculptures,** viz. in the centre a *liṅga* on a stand, with an upright figure of a votary facing it on the proper right of it, and still further to the right a cow with sucking calf. Underneath this is the inscribed area, which seems to include three faces of the slab. The first face, containing ll. 1-17, is about 1 ft. 1 in. wide and 3 ft. high; the second, containing ll. 18-40, is about 10 in. wide and 3 ft. 7 in. high; the third, containing ll. 41—end, is about 3 ft. 8½ in. high and 6 in. wide, except at the bottom, where it runs out towards the right to a width of 10¾ in., enclosing the last two lines.—The **character** is fair Kanarese, somewhat inclined to angularity, with letters varying from 1 in. to 1½ in. in height. Its whole tendency is towards the later type, rather than the archaic. The cursive *r* is found only in the ligature *rva* (ll. 51, 58).—The **language** is Old Kanarese, except for the concluding Sanskrit verses. We may note the sporadic change of *m* to *v* in *-āchchhādanavaṁ* (l. 32) and *mahājanavuv=* (ll. 43-4), and the conditionals *ādaḍe* (l. 37) and *appaḍe* (l. 45), which all shew a tendency towards the medieval dialect.

The **record** opens (ll. 1-8) by referring itself to the reign of **Akaḷaṅkacharita Iriva-bedaṅga Satyāśraya** (*Dynast. Kanar. Distr.*, p. 432), while his officer **Seṭṭi Brahmayya** was administering Tumbagi (ll. 8-15), and registers gifts to local religious foundations by the latter and a lady named **Āychakabbe,** with rules for their management (ll. 15 ff.).

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[1] *āchāri*, 'an artisan,' is a Tamiḷ form of *āchārya*.

[2] *Puravu* occurs also in *South-Ind. Inscr.*, Vol. II, p. 386, text line 99, and above, Vol. IV, p. 224, text line 19. For its meaning see the Madras Epigraphical Report for 1920, p. 96.

[3] The same measure is mentioned in *South-Ind. Inscr.*, Vol. I, pp. 117, 140.

[4] A notice of the inscription has been given by Dr. Fleet above, Vol. XII, p. 306.

The **date** is specified on ll. 11-15 as Śaka 926 (expired), **Krōdhi**; **Āshāḍha** *amāvāsyā*; an eclipse of the sun. This is quite regular. The Southern cycle is used, and according to the *Sūrya-siddhānta* (true system) the *tithi* quoted was connected with **Thursday, 20 July, A.D. 1004**, ending 3 h. 33 m. after mean sunrise (for Ujjain). On that day there was an eclipse of the sun at 3 h. 18 m. after sunrise by Laṅkā time. Mr. R. Sewell, who has kindly examined this date at my request, remarks that by the true system of the *Ārya-siddhānta* the result is the same, but that by the mean system of the *Ārya-siddhānta* the *tithi* was connected with the previous Wednesday, 19 July.

The **place-names** mentioned are: the **Pagalaṭṭi Three-hundred** (l. 10); the **Tumbige Agrahāra** (l. 11); and **Kalkeṟe** (ll. 23-4). On Pagalaṭṭi I may refer to the remarks of Dr. Fleet above, Vol. XII, p. 306 ff., where he identifies it with the district variously called Hagariṭige, Hagariṭṭage, or Hagaraṭage and connected with the village formerly designated Hagariṭage, Hagaliṭṭage, or Hagariṭṭage, and now known as Hagaraṭṭagi, Hagariṭige, Hagariṭṭige, or Hagariṭṭigi, in the Shōrāpūr *tāluka* of Gulbarga District in the Nizam's Territories. Kalkeṟe cannot be identified with certainty; there are several places of the name.

TEXT.[1]

1 Svasti samasta-bhuvan-āśra-
2 ya Śrī-Pri(pṛi)thvī-vallabha
3 mahārājādhirāja para-
4 mēśvara paramabhaṭṭārakaṁ
5 **Satyāśraya**-kuḷa-tiḷaka-
6 n=**Akaḷaṁkacharitan**=**Iṟiva-**
7 **beḍaṁgaṁ** śrīmat **Satyā-**
8 **śraya-dēvara** pāda-padm-ō-
9 pajīvi **Seṭṭi Brahmayyaṁ**
10 **Pagalaṭṭi 300ṟaṟa** baḷi-
11 ya **Tuṁbige-agrahāra Sa-**
12 **kha-varisha**[2] **926neya Krō-**
13 **dhi-saṁvatsarad**=**Āshāḍa(ḍha)d**=amā-
14 vāsyeya[ṁ]duve sūryya-gra[ha*]-
15 ṇadandu **Seṭṭi Brahmayyaṁ** Bra-
16 h[m]ēsva(śva)ra-dēvargge biṭṭa ke-
17 y=matta 200 ada * * *
18 paṟekāṟa-sūḷe-
19 yargge koṭṭa key=ma-
20 tta 30 maṭa(ṭha)kke koṭṭa ke-
21 y=matta 50 dēvālaya-
22 nimittaṁ **koṭṭa** ke-
23 y=matta 120 [|*] **Kalke-**
24 **ṟeya Geṇṇayyana**
25 magaḷ=**Āychakabbe** ta-
26 mma **mānyad**=oḷage ma-
27 ṭa(ṭha)kke koṭṭa key=matta
28 50 antu maṭa(ṭha)kke ma-
29 tta 100 [|*] Inn=alliya pha-
30 ladalu brahmacharyya-

[1] From the ink-impressions.

[2] Read *Śaka-varsha*.

31 m=uḷḷa tapasviya 5
32 rgge[1] aśan-āchchhādanavaṁ
33 naḍeyisuvar=alli-
34 y=orvvar=pradhānar=appa-
35 vargge uttamāgra[ṁ*] na-
36 ḍeyisuva[r*] brahmacha-
37 ryy-ādi-lōpam=ādaḍe
38 poṟa-vaḍisuvar=[u]-
39 ttamar=appar=aṁt=appa-
40 r=ī sthitiyoḷ=ī dharmmamaṁ
41 pratipāḷisuva-
42 r=ūr-oḍeyaruṁ
43 mahājanavu-
44 v=idan=upēkshi-
45 sidar=appaḍe gu-
46 ṇa-dōsham=ava-
47 [ra]n=ēṟuguṁ ||
48 ūr-oḍeyara-
49 l=akke mahāja-
50 nadoḷ=akke ā-
51 van-orvvan=ī sthi-
52 tiyoḷ=allade
53 peṟat=ondu sthi-
54 tiyoḷ kiḍi-
55 suv-avaṁ śvāna-
56 gā(ga)rdabha-chāṇḍāḷaṁ
57 same(ma)ya-bāhiraṁ [||*]
58 Sarvvathā pāḷanīya-
59 ṁ tta(tu) tad-dēśas=tais=tu
60 bhūmipai[ḥ*] [|*] ya-
61 sya yasya ya-
62 dā bhūmi[s*]=tasya
63 tasya tadā phalaṁ [||] [1*]
64 Sva-dattāṁ para-da-
65 [t]tā[ṁ v]ā yō ha-
66 rēta vasuṁdhar[āṁ] [|*]
67 shashṭhiṁ varisha[2]-sa-
68 hasrāṇi vishṭhā-
69 [y]āṁ jāyatē krimiḥ [||* 2*
70 [Ma]ṁgaḷa mahā-śri ||

TRANSLATION.

(Lines 1-9) **Seṭṭi Brahmayya,** who finds sustenance at the lotus-feet of—hail!—the refuge of the whole world, darling of Fortune and Earth, great Emperor, supreme Lord supreme Master, ornament of **Satyāśraya's** race, **Akaḷaṅkacharita Iṟivabeḍaṅga Satyāśrayadēva** :—

(Lines 10-23) (*While governing*) the **Agrahāra of Tumbige,** forming part of the **Pagalaṭṭi Three-hundred,** during the last lunar day of **Āshāḍha** in the cyclic year **Krōdhi,**

[1] Read *5 tapasviyargge.* [2] Read *shashṭir=varsha-.*

the 926th (*year*) of the **Saka era,** during an eclipse of the sun, **Setti Brahmayya** granted for the god Brahmēśvara a field, 200 *mattar*; . . . for the drummers and public women he granted a field, 30 *mattar*; for the monastery he granted a field, 50 *mattar*; for the benefit of the temple he granted a field, 120 *mattar.*

(Lines 23-29) **Āychakabbe,** daughter of **Geṇṇayya** of **Kalkeṟe,** granted for the monastery out of her own honorary estate a field, 50 *mattar.* Thus (*there are*) for the monastery 100 *mattar.*

(Lines 29-47) Likewise out of the revenues of this land they shall provide food and clothing for the 5 ascetics living in celibacy. In the case of any superiors of this place, if there should be committed a breach of celibacy or the like in conducting the highest offices, they shall expel (*them*).[1] The leading men shall be such. They shall preserve this pious foundation, under this constitution. If the mayors of the town and the burgesses should have neglected it, guilt shall accrue to them. Any person, whether of the mayors of the town or of the burgesses, who should violate this constitution or any other constitution, (*will become*) a dog, an ass, or a Chāṇḍāla, an outcast from society.

(Verses 1 and 2: Sanskrit formulæ.)

(Line 70) Happiness! great fortune!

No. 3.—A NAGA FIGURE IN THE MATHURA MUSEUM.

By Y. R. Gupte, B.A.

On page 18 of the Annual Progress Report of the Archæological Survey of India, Northern Circle, for the year 1908-1909 an **inscribed pedestal** from Rāl (No. 45) is mentioned. The upper part of the image must have been found since I examined the sculpture at Mathura. It represents a Nāga standing between two Nāgīs. The height of the sculpture is 4′ 2″. The inscription measures about 2 ft. in breadth and 7 in. in height.

The image came from a mound near the village of Bhadāl about six miles from Mathura. From local enquiries it appeared that people from the neighbouring villages used to visit the spot and vows were made to the deities by barren women. When they got sons, they resorted to the place for tonsuring their hair.

The Nāga in the centre has a canopy of seven hoods with forked tongues, as is usually the case with the other Nāga images of Mathura, and is similarly dressed. The threefold triangular necklace is a little damaged on the breast. We can see the bracelet on the right wrist, and a similar one on the left is hidden by the upper garment. The position of the hands is similar to that of the Nāga figure from Mathura city of the Kushāṇa year 52 (*A. S. R.* for 1908-9, Plate LIV). The left hand holds a small vessel; and a lotus bud is visible in the right. The Nāgīs are dressed in garments of the same stuff as the Nāga and have the same appurtenances in their hands. Beneath the feet of the deities were short inscriptions, now much defaced, which probably contained their names. The vestiges that remain favour this view.

On the pedestal are five males and five females and also two boys with folded hands. They are worshippers. The right hand of the man to the extreme proper right is gone. The male to the left and the female to the extreme proper left have their hands folded, the others holding lotus stalks in their right hands. On the lower part of the pedestal is an interesting inscription

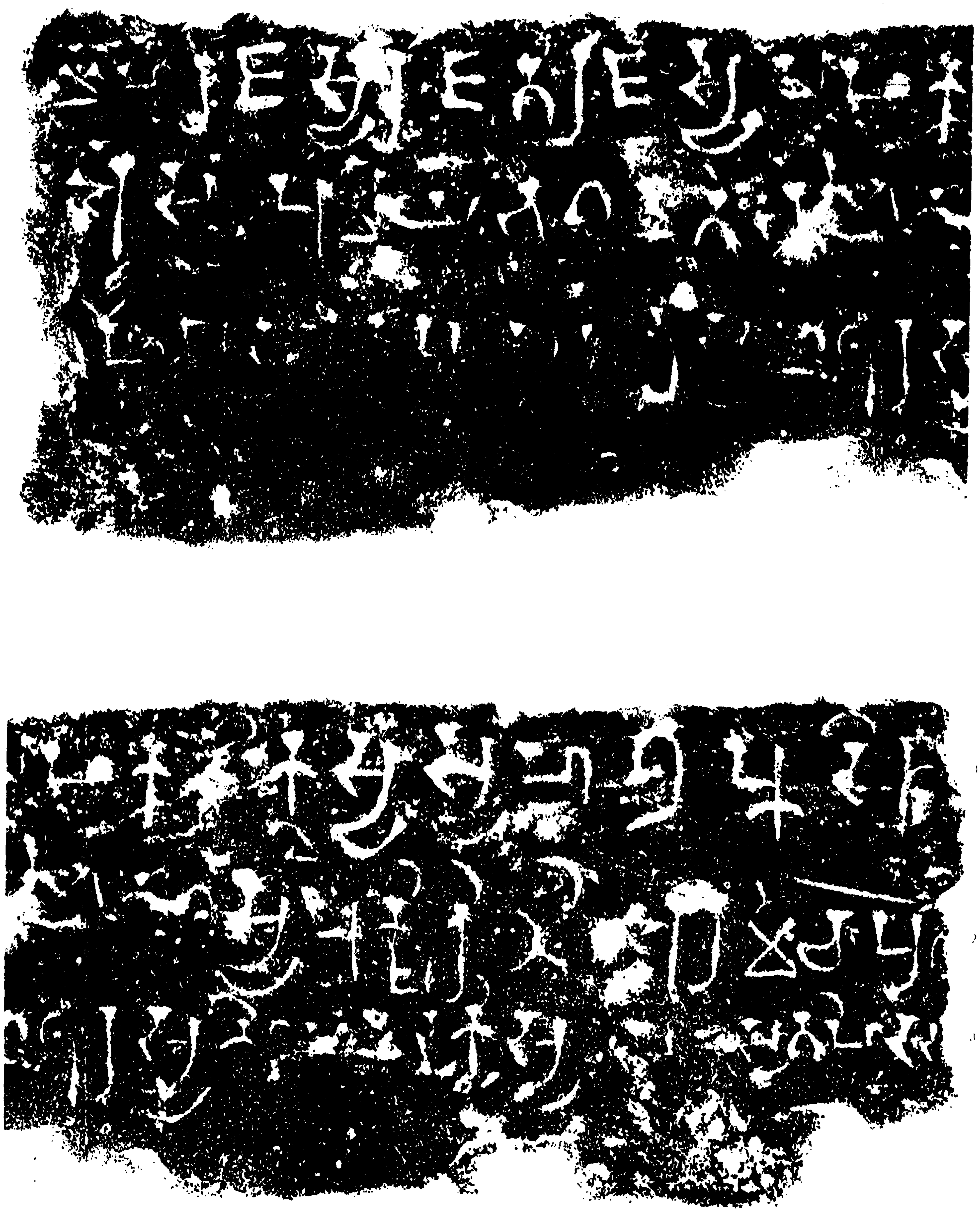
[1] [*Uttamāgrah* means 'sumptuous meal'; see *South Indian Inscriptions*, Vol. III, Part III, p. 266, footnote 1. (The meaning is: One of the superior members of these will be provided with a sumtuous meal'.—H. K. S.]



From a photograph kindly supplied by Mr. H. Hargreaves

SCALE ONE-SIXTH

Mathura Naga Image inscription: the year 8 of Kanishka.



F. W. THOMAS

SCALE ONE-HALF

WHITTINGHAM & GRIGGS COLL

of three lines, of which the second and third are much damaged, making the decipherment of a part of the third line impossible.

Several images of Nāga deities, both inscribed and without inscriptions, have been found in Mathura. Of these the following are dated :—

Image of Dadhikarṇa, of Saṁvat 26 va 3 di 5 (*Ind. Ant.*, Vol. XXXIII, p. 102, and *Ep. Ind.*, Vol. I, pp. 380 f. and 390, No. XVIII, and Dr. Vogel's paper in the *Arch. Survey Report* for 1908-9, pp. 159 ff.).

Nāga image of the year 40 of Huvishka, in the second month of winter, the 23rd day (Dr. Vogel's catalogue of the Arch. Museum at Mathura, No. C 13, pp. 88-9 ; *A. S. R.* for 1908-9, p. 161).

Nāga image of sa 52 va 3 di 25 (Dr. Vogel's catalogue of the Arch. Museum at Mathura, p. 91), *Arch. Survey Report* for 1908-9, p. 161.

Besides, there is a fragment which Dr. Vogel assigned to the 3rd century of the Christian era (Dr. Vogel's catalogue of the Arch. Museum at Mathura, p. 90 ; *A. S. R.* for 1908-9, p. 162).

The image described in this note dates from the year 8 of the Kushāṇa era and is the earliest dated Nāga one at Mathura.

The palæography does not call for many remarks. The general characteristics are dealt with in Dr. Bühler's *Indian Palæography*, edited by Dr. J. F. Fleet, p. 41. The peculiarities observable in the present inscription are these :—(1) The *kha* is triangular below, but its hook is large ; (2) the upper horizontal stroke of *ra* is turned into a curve, while the lower is split up into lines ; (3) *ta* in the 3rd line shows a loop ; (4) the lower part of *da* is more slanting than in all examples given by Dr. Bühler ; (5) *va* is rounded on the left ; (6) the left limb of *sa* is never turned into a loop.

TEXT.[1]

L. 1 Mahārājasya rāj-[ā]tirājasya [Shāhi] **Kāṇikkhasya** Sa[2] 8 gri 4 di 5

L. 2 as[yā]ṁ p[ūrvv]āy[ā]ṁ bhagavataḥ [**Bhūmi-nāga**]sya (1) pukshiriṇi ār[ā]mō cha pra[ti]-

L. 3 [shṭhāpitō . . . putras[y]a . ṭurasya niya[mada]kisya [sarvva]sat[v]a hi(hita)-su (sukhārthaṁ) (2) . . . . . .

REMARKS.

(1) There can be little doubt about the reading *Svāmi-nāgasya*. I have examined the stone in all lights and shades. (2) *Hi* and *su* at the end of the third line stand for *hita-sukhārthaṁ*. This abbreviation is due to want of space.

TRANSLATION.

In the year 8 of the great king, the king of kings the **Shāhi Kāṇikkha in the fourth (month of) summer, on the 5th day** on that (date specified as) above, a tank and a garden of the holy Bhūmi naga was founded . . . . °ṭura, son of . . . . . . for the welfare and happiness of all sentient beings.

The Prākṛitized form *Kāṇikkha* deserves notice. The form with the long *ā* in the first syllable has already been observed in two inscriptions, namely those on the statue of Kānishka

[1] From the original.

[2] It appears that the engraver first cut *sya*, but afterwards found out his mistake and deeply engraved only *sa*.

himself and the Bodhisattva statue of the Kushāṇa year 3, in the Sārnāth Museum. Bhūmināga is first met with in this record.

No. 4.—A VAKATAKA INSCRIPTION FROM GANJ.

BY V. S. SUKTHANKAR, PH.D.

This inscription, which is now brought to notice for the first time, was discovered by my friend Babu Rakhaldas Banerji, Superintendent, Archæological Survey of India, Western Circle, in 1919, during one of his tours of inspection in Central India. The excellent estampages from which the accompanying blocks have been prepared were made under his direct supervision, and very kindly placed by him at my disposal for publication.

The inscription, Mr. Banerji tells me, is engraved on a detached slab of stone which he found lying at the bottom of a *doṅgā*, adjoining a hill called Maluhā-ṭongi near Ganj in the Ajayagaḍh (Ajaigarh) State in Bundelkhand. Close by is a ruined stone structure, probably a dam to hold the waters of the stream passing along the *doṅgā*. The find-place of the record is not far removed from the ruined city of Kuṭhārā, where Cunningham discovered in 1883-84 the Nāchanē-kī-talāī inscription, which was first brought to notice by him, in 1885, in *Archæological Survey of India*, Vol. XXI, pp. 97 f., and re-edited by Fleet in *Gupta Inscriptions*, pp. 233 ff. and Pl. xxxiii B. The Ganj inscription, like the one discovered by Cunningham, is one of the oldest records of the Vākāṭaka dynasty, and as such is worthy of being carefully preserved.

From the subjoined transcript it will be seen that the text of our inscription is practically identical with that of the Nāchanē-kī-talāī record of the reign of *Mahārāja* Pṛithivishēṇa, edited by Fleet in *Gupta Inscriptions*; it differs from the latter only in the length and the number of lines, and in the spelling of a couple of words. But our inscription is in a much better state of preservation than that edited by Fleet; at all events the stone has yielded an impression far superior to the one from which the block accompanying Fleet's article was prepared. Consequently we can study the forms of the letters in the subjoined facsimile much better than in that of the Nāchanē-kī-talāī version. Moreover, the writing of this inscription being perfectly distinct, we can give a transcript which is more reliable, and which at the same time discloses certain minor inaccuracies in Fleet's transcript, errors which even then could have been avoided by a more patient study of the available material.

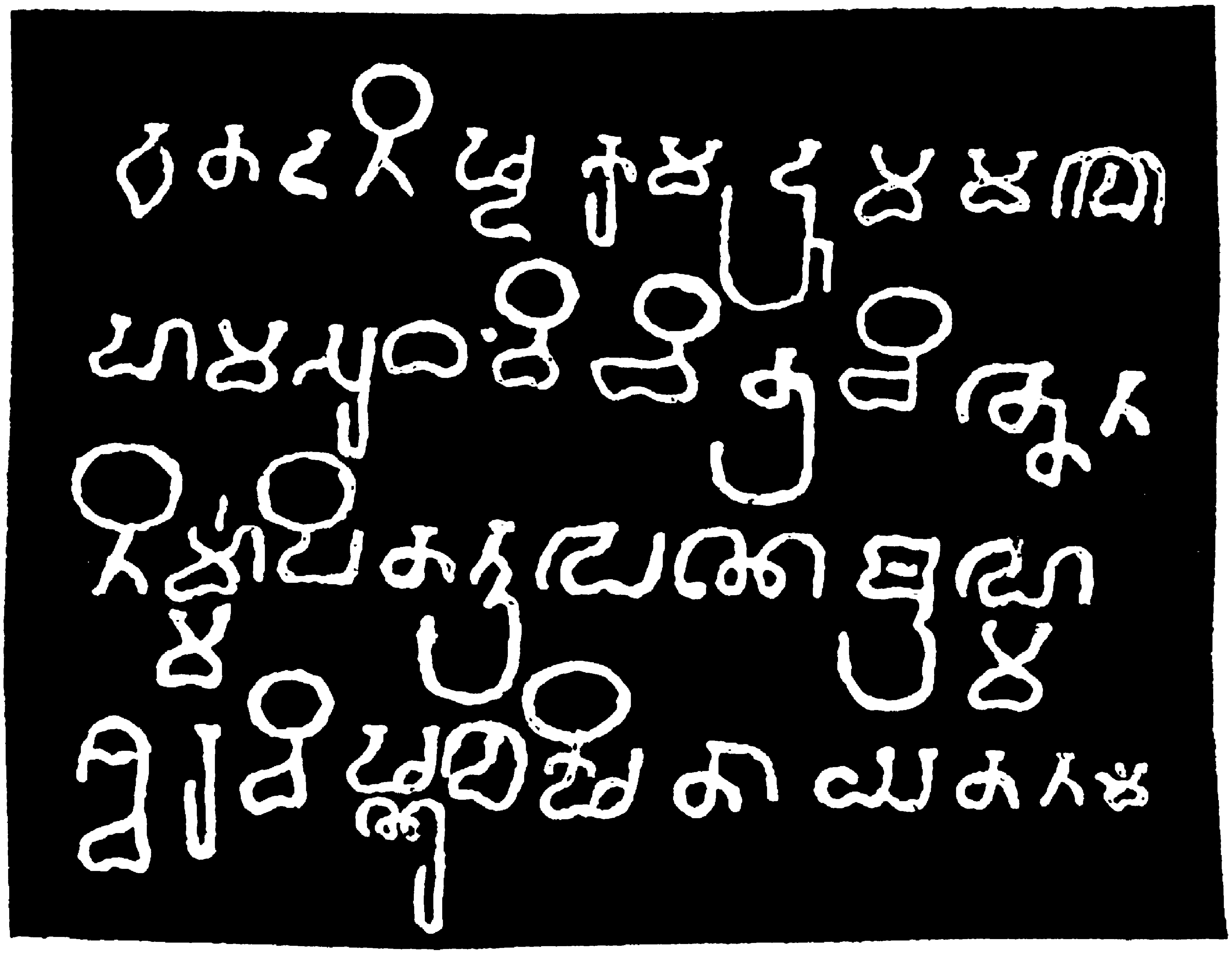
The writing covers a space about 25" broad by 12" high. In the centre of the first line of the inscription there is a sculpture of a wheel, of which only a part is visible in the facsimile. The average size of such letters as *m*, *p* and *v* is about 2".—The characters belong to the 'southern' variety of alphabets, of which the distinguishing features, in our inscription, are the hooks at the lower ends of the verticals of *k* and *r*. In particular, we may say that the letters are a specimen of the Central Indian alphabet of the period, which on account of the peculiar 'box-headed' tops of the letters is known as the 'box-headed' sub-variety of the southern alphabet.[1] In our specimen the boxes are very conspicuous, and uniformly hollow. The letters are unequal in size and uncouth in appearance. It may be added that they betray a conscious effort to substitute angles for curves in the configuration of letters. The letters *t* and *n* are sharply distinguished from each other: the latter has always a knot at its lower end.—The language is Sanskrit, and the inscription is in prose.—As regards the orthography the only point calling for remark is the phonetic doubling of the *d* of *dh*, in °*d-ā(ṁ)nuddhyātō*° (l. 2), before *y*, and of the *t* of *th*, before *r*, in *puṇyā-rtthē* (l. 3).

[1] See Bühler, *Indische Palæographie*, p. 62.

1. A Vakataka Inscription from Ganj.



2. Mandagappattu Inscription of Vichitrachitta.



F. W. THOMAS

SCALE ONE-FIFTH

WHITTINGHAM & GRIGGS, PHOTO-LITH.

The inscription, which is a record of the reign of *Mahārāja* Pṛithivishēṇa [I.] of the Vākāṭaka family, states merely that a feudatory of his, Vyāghradēva by name, had made something or other for the sake of the religious merit of his parents. The exact nature of this act of piety has been left unspecified, just as in the other version discovered by Cunningham. The silence of these records on the point leads us to infer that the slabs on which the inscriptions are inscribed must have been built into that the making of which they were intended to record.

Our information regarding the **Vākāṭaka** dynasty is unfortunately very scrappy. All the important events in its history known to us have been succinctly summarized by Kielhorn[1] in his article on the Bālāghāṭ plates of Pṛithivishēṇa II.; we can even now add nothing of consequence to what has been said there. We do not possess exact dates for any of the kings of this family, nor can we form any clear idea of the extent of the country ruled over by them. Regarding Pṛithivishēṇa I. we know that he was the son of Rudrasēna I. and the great-grandson of Pravarasēna I., the latter being either the very first king or one of the early kings of this house. It should seem that the Vākāṭaka king at whose hands the 'lord of Kuntala' had suffered defeat, as recorded in the Vākāṭaka stone inscription at Ajaṇṭā,[2] was this same Pṛithivishēṇa. Beyond these few facts we know nothing of much consequence regarding the king referred to in our record.

About Vyāghradēva, the feudatory of Pṛithivishēṇa, we know still less. Indeed, Vyāghra appears as the name of chieftains in several well-known inscriptions;[3] but it is not possible to identify our Vyāghradēva with any of them.

Bühler[4] assigns the copper-plates of the Vākāṭaka Pravarasēna II., the grandson of Pṛithivishēṇa I., to the fifth or sixth century A.D.; it is not known to me on what grounds. I have examined the inscriptions of the Vākāṭaka dynasty and compared them with the allied inscriptions engraved during the time of the Guptas,[5] of the kings of Śarabhapura,[6] of Tīvara,[7] of Kōsala and of the early Kadamba kings,[8] without being able to arrive at any definite conclusion regarding the age of the Vākāṭaka inscriptions. Bühler's date, however, appears to me to be far too early. My impression is that there can be no objection, on palæographic grounds, to assigning this record of the Vākāṭakas to as late an epoch as the seventh century A.D. I conclude this short notice by drawing attention here to the remark of Kielhorn that the Bālāghāṭ plate of Pṛithivishēṇa II., who was the son of the great-grandson of the Pṛithivishēṇa of our inscription, "may be assigned with probability to about the second half of the eighth century A.D."[9]

TEXT.[10]

1 [11]**Vākāṭakāṇā** mahārāja-śri[12]-
2 **Pṛithivishēṇa**-pād-ā(ṁ)nuddhyātō **Vyāghradē-**
3 vō mātāpitrō[ḥ*] [13]puny-ārtthē [14]kṛitam=iti [||*]

[1] Above, Vol. IX, pp. 268 f.
[2] *Arch. Surv. West. Ind.*, Vol. IV, p. 124, verse 8.
[3] Kielhorn's *List of Inscriptions of Northern India*, Nos. 270, 387 and 509.
[4] *Indische Palæographie*, pp. 62 f.
[5] *Corpus Inscriptionum Indicarum*, Vol. I, Nos. 2-3.
[6] *Gupta Inscriptions*, Nos. 40-41.
[7] *Ibid.*, No. 81.
[8] *Ind. Ant.*, Vol. VII, pp. 35-7.
[9] Above, Vol. IX, p. 270.
[10] From a set of estampages prepared and kindly lent to me by Mr. R. D. Banerji.
[11] Read *Vākāṭakānāṁ*. Fleet in his transcript has wrongly spelt this word with the dental *n* in *Gupta Inscriptions*, Nos. 53-54.
[12] Read *śrī*.
[13] Read *puṇy-ārtthē*. Here also Fleet has wrongly transcribed the word, both as regards the dental *n* and the case-ending. In Cunningham's version the word is spelt exactly as here.
[14] The construction is faulty. The verb should be in the active voice.

TRANSLATION.

Vyāghradēva, who meditates on the feet of the *Mahārāja* the illustrious **Prithivishēṇa,** (of the family) of the **Vākāṭakas,** has made (this) for the sake of the religious merit of (his) parents.

No. 5.—MANDAGAPPATTU INSCRIPTION OF VICHITRA-CHITTA.

BY T. A. GOPINATHA RAO, M.A., TRIVANDRAM.

The small village of Maṇḍagappaṭṭu is situated in the Villupuram *Tāluka* of the South Arcot District and is about five miles south-west of Pēraṇai, a station on the main line of the South Indian Railway. In a small hill near Maṇḍagappaṭṭu is cut out a **shrine,** on the façade of which is engraved the inscription which is edited below. The shrine has at its back end three niches, which are dedicated to the gods Brahmā, Īśvara and Vishṇu respectively. On the panels on either side of this shrine is carved a *dvāra-pālaka*; the figure on the right very much resembles those which are found in the rock-cut shrines attributable to the Pallava king Mahēndravarman I. From this and other considerations based upon its architectural peculiarities Mons. G. Jouveau-Dubreuil has attributed its excavation to Mahēndravarman I. A photograph of the front view of this rock-cut shrine is given by him in his *Pallava Antiquities*, Vol. I, Pl. XXVIII. The cave was visited by the staff of the office of the Madras Epigraphist, and the inscription was copied in 1905. Regarding this cave Mr. Venkayya wrote in his *Annual Report on Epigraphy* for that year thus :—" The cave at Daḷavāṉūr in the Tiṇḍivaṉam *Tāluka* consists of a shrine and a *maṇḍapa* in front of it, thus resembling to a certain extent the upper cave at Trichinopoly, while that at Maṇḍagappaṭṭu (mentioned in Mr. Sewell's *List of Antiquities*, Vol. I, p. 209) is a smaller one, which looks as if it had been left unfinished . . . . There is only one inscription in the Maṇḍagappaṭṭu cave, which is so much damaged that the name of the king cannot be made out. To judge from what remains of it, we may say that it must also belong to the Pallava period. And, as we know that it was Mahēndravarman I of that dynasty that excavated almost all the hitherto known monolithic caves in the Tamiḻ country, we may not be altogether wrong, if we suppose that the one at Maṇḍagappaṭṭu also came into existence during his reign." Depending upon probability, Mr. Venkayya hazarded a guess which has now turned out to be quite correct. It is true that the shrine was excavated during the reign of Mahēndravarman I; but no serious attempts were made by the Madras Government Epigraphists at deciphering this epigraph. The credit of having made out the name of the king belongs to the French Professor, Mons. G. Jouveau-Dubreuil, of Pondicherry. He has visited Maṇḍagappaṭṭu more than once to obtain eye-copies and mechanical impressions, as also to acquire any further knowledge by studying the inscription directly from the stone. His zeal and perseverance have been richly rewarded by his discovery of the name of the king in whose reign the shrine was excavated. At this stage he sent me the impression of the inscription and his eye-copy, so that I might complete the reading of the document, translate and annotate it. When my notes, translation, etc., went to him, it had become impossible for him to edit the inscription himself; for he had to proceed to Cochin China on military duty. He therefore sent me a good photograph of a very carefully prepared eye-copy and asked me to edit the epigraph as early as possible. From the mechanical impression kindly lent to me by Mons. Jouveau-Dubreuil and the photograph of the eye-copy prepared jointly by me and that gentleman I edit this important inscription below.

The record consists of four lines of writing in **Grantha** characters of the first half of the 7th century A.D., and is a Sanskṛit verse in the *Gīti* metre. As has been remarked by Messrs. Venkayya and Jouveau-Dubreuil, the inscription is somewhat badly damaged, and it is only with difficulty that one can read it successfully; but one need not on this score imagine that the

reading is fanciful. The inscription states that the shrine was caused to be made by the king **Vichitra-chitta** for the accommodation of the three deities **Brahmā**, **Īśvara** and **Vishṇu**, without using in its construction bricks, timber, metal or mortar. This short record is of importance in more ways than one. The most important information conveyed by it is that before the time of Vichitra-chitta bricks, timber, metal and mortar were the common temple building materials. Evidently the basement and walls of the buildings were of brick work, plastered with chunam, and the superstructures were composed of wood work held in position by the use of metallic nails and bands. This, in fact, is even to this day the mode of construction of temples on the Malabar Coast. It is difficult to find a single temple in Southern India which belongs to a date prior to the 7th century of the Christian Era. One would naturally be inclined, therefore, to surmise that temple building was never in vogue before that century. But immediately after this period we see a number of temples which have sprung into existence, and this also seems to lend weight to the surmise that no temples were built before the time of Mahēndravarman I in Southern India. The statement made in this inscription that Mahēndravarman did not employ bricks, timber, metals and mortar clearly warrants us in drawing the conclusion that the temples built before his time were all of such easily perishable materials as bricks, etc., that they were all ruined in course of time, and that this is the first rock-cut shrine of his. This is clear from the special mention of *anishṭaka*, etc., in the case of this shrine. It is impossible for a number of temples to have come suddenly into existence from the beginning of the 7th century, unless the building of temples had been practised long before.

We know from the inscriptions of the cave temple at Pallāvaram that Vichitra-chitta was one of the *birudas* of **Mahēndravarman I** (see Pl. XXI in the *Pallava Antiquities* of Mons. G. Jouveau-Dubreuil, wherein the name Vichitra-chitta is clearly legible; *vide* also for the *biruda* Vichitra-chitta, p 74, para. 14, of *Ep. An. Rep.* for 1909). It is, therefore, patent that the shrine was caused to be excavated by Mahēndravarman I.

Again, the *biruda* Vichitra-chitta means 'the curious or inventive-minded one.' One can easily concede to the king Mahēndravarman the title 'inventive-minded,' in so far as he avoided bricks, etc., commonly used by all in the construction of their buildings, and devised quite a new path, namely the cutting out of rock-temples, which needed neither bricks, timber nor mortar. His country extended far north of the river Kṛishṇā, where he must necessarily have seen some of the earlier rock-cut temples and so have introduced into Southern India the new style of cutting temples in rock. That he was the first to introduce into Southern India the method of excavating temples in the solid rock is certain; for we do not find even a single rock-cut shrine which belongs to a time before the reign of Mahēndravarman. We know of no less than fifty rock-cut shrines in Southern India, not one of which is earlier than the time of this Pallava king. In fact, the art of cutting temples out of rock was contemporaneous with the Pallava dynasty and disappeared after them.[1]

The *birudas* of Mahēndravarman are not mere boasts; each of them has a meaning which is based upon some act done by him. We have seen that the *biruda* Vichitra-chitta is assumed by him for his invention of a new method of raising temples. Similarly, the *biruda* Matta-vilāsa is, in fact, indeed due to his having composed the pleasant little burlesque the *Mattavilāsa-prahasana*, in which he ridicules an actual *matta* or madman, a drunken Kāpālika and meat-eating Bauddha Bhikshu.[2] Mention is made of this burlesque in his inscription found in Māmaṇḍūr;

[1] [See *South-Indian Images*, Introduction, pp. 1 f.—H. K. S.]

[2] The following extracts from this work will show that it was the composition of Mahēndravarman:

सूत्रधारः—भवति ! श्रूयताम् । पल्लवकुलधरणिमण्डलकुलपर्वतस्य सर्वनयविजितसमस्तसामन्तमण्डलस्य आखण्डलसमपराक्रमश्रियः श्रीमद्विमानुरूपदानविभूतिपरिभूतराजराजस्य श्रीसिंहविष्णुवर्मणः पुत्रः शत्रुषड्वर्गनिग्रहपरः परहितपरतन्त्रतया महाभूतसधर्मा महाराजः श्रीमहेन्द्रविक्रमवर्मा नाम ।

The *birudas* Avani-bhājana, Guṇa-bhara, Matta-vilāsa and Śatru-malla are also introduced ingeniously in the play; these, we know, are the *birudas* of Mahēndravarman I,

the portion where it occurs is somewhat damaged, but the name of the work is not broken; the passage runs thus: *Mattavilāsādi-padam-prahasan-ōttamaṁ*[1] . . . and in the other fragments of the inscription we see that mention is made of poets like Vyāsa and Vālmīki, as also of *tāḷas*, etc., of music. Thus then each *biruda* of Mahēndravarman appears to have been bestowed on him or assumed by him for some ostensible reason. The *biruda* Saṅkīrṇa-jāti[2] of this king is rather curious; it means 'of mixed caste.' Perhaps the parents of Mahēndravarman were of different castes. The significance of the other *birudas* will become patent as further researches are made.

It is interesting to note that at the time of Mahēndravarman the three deities Brahmā, Śiva and Vishṇu were enshrined together in the same temple in adjacent niches. Such a group consisting of Brahmā, Vishṇu and Śiva is called Hari-Hara-Pitāmaha or Dattātrēya. (See my *Elements of Hindu Iconography*, Vol. I, pp. 251-256, as also Pl. LXXII, fig. 1 of the same volume.) At Mahābalipuram also there exists a Trimūrti cave; but, strangely enough, the cell which is supposed to have been dedicated to Brahmā is occupied by a figure which has only one face. The figure of Brahmā ought, according to the *āgamas*, to be always shaped with four faces, and in practice also we find that three faces are always shown in sculpture, the fourth being supposed to be at the back of the figure. In spite of the fact that the figure in the Mahābalipuram rock-cut shrine has only one face Dr. Vogel in his *Iconographic Notes on the Seven Pagodas*, contributed to the Director-General of Archæology's Annual Report for 1910-11, identifies the figure with Brahmā (see page 58). Prof. Jouveau-Dubreuil has sent me a note containing his own explanation concerning this image for publication here, which I reproduce below. "The Trimūrti cave at Mahābalipuram is formed of three cells; the one on the right contains an image of Vishṇu, and the middle one an image of Śiva. It is, therefore, but natural to suppose that the left cell contains an image of Brahmā. I was the first author to remark (vide *Archéologie du Sud de l'Inde*, Vol. II, Pl. XVIII B) that the god in the left cell has only one head and so could not be identified with Brahmā. I have thought fit to affirm that this unknown god is Subrahmaṇya, who is represented also on the ground-floor of the Dharmarāja Ratha[3] (*Archéologie du Sud de l'Inde*, Vol. II, Pl. XVIII B). However, the problem why the trinity Subrahmaṇya, Śiva and Vishṇu is found in place of the usual trinity Brahmā, Vishṇu and Śiva has remained till now unsolved. I believe I shall be able to explain why Subrahmaṇya is substituted for Brahmā in the group of the trinity at Mahābalipuram. Mr. T. A. Gopinatha Rao says in his *Elements of Hindu Iconography*, Vol. II, Part II, page 439, 'Brahma-śāstā: This is the aspect of Subrahmaṇya in which he put down the pride of Brahmā by exposing his ignorance of the Vēdas. He should be represented with a single face and four arms; he should have only two eyes. In the back hands there should be the *akshamālā* and the *kamaṇḍalu*,[4] and the front hands should be held in the *varada* and *abhaya* poses. The colour of Brahma-śāstā should be the red of the lotus flower.' If we note that the image of Subrahmaṇya in the Trimūrti cave wears on its breast a double chaplet of *rudrāksha* beads, and that at the entrance to the sanctuary there are two personages dressed as Saṁnyāsins and having pointed beards, we shall conclude that the sculptors of Mahābalipuram have put Subrahmaṇya in the place of

[1] This fact was also discovered by Prof. Jouveau-Dubreuil: see his *Pallavas*, p. 38.

[2] [*Saṅkīrṇajāti* is the name of a variety of musical time. Perhaps Mahēndravarman I held this *biruda* as an inventor of this method of keeping musical time.—H. K. S.]

[3] Behind the rock bearing the Trimūrti shrine are executed the figures of a peacock, an elephant and a monkey, carved in half relief. We know that the peacock is the characteristic vehicle (*vāhana*) of Subrahmaṇya. The elephant is generally associated with the temple of Śāstā, and is here perhaps intended to show that the image is that of Brahma-śāstā. [Temples of Traipurushadēva are found dedicated to Sun, Śiva and Vishṇu. Why should not the Brahma-śāstā figure represent the Sun?—H. K. S.]

[4] Dr. Vogel takes the objects in the back hands as a flower and a ring, neither of which is right. The hands carry only a *kamaṇḍalu* and an *akshamālā*, as required by the *āgamas*.

Brahmâ because they have placed there Brahma-śâstâ, a deity superior to Brahmâ in his knowledge of the Vêdas. I think fit to draw attention to the existence of the trinity consisting of Subrahmaṇya, Śiva and Vishṇu and also to explain it with the help of the above-mentioned excellent work of M. R. Ry. T. A. Gopinatha Rao."[1]

TEXT.[2]

1 एतदनिष्टकमद्रुम[मलो]-
2 हमसुधं[विचित्रचि]त्तेन [।*]
3 निर्म्मापितनृपे[ण] ब्रह्मे-
4 श्वरविष्णुल[क्षि]तायतनम् [॥*]

TRANSLATION.

This brickless, timberless, metalless and mortarless temple, which is a mansion for (the Gods) Brahmâ, Îśvara and Vishṇu, was caused to be created by the king **Vichitra-chitta.**

No. 6.—THE FIRST ARYA-SIDDHANTA.

Mean System.

(*A continuation of the author's "Indian Chronography."*)

By Robert Sewell, I.C.S. (Retired).

303. It has long been known that in earlier years the Pañchâṅg Brahmans in India framed their local almanacs on calculations made by the use of the mean, as opposed to the true or apparent, motions of the sun and moon. The change from the mean to the true systems of calculation was advocated by Śrîpathi (A.D. 1040), and the latter system may have been adopted in some places about that time; becoming more general from about A.D. 1100 onwards. India, however, is a very conservative country, and the late Dr. Fleet was of opinion that the mean system may have been adhered to, in some tracts at least, till a far later date.

304. With this opinion in mind I have prepared the Tables which follow, so as to cover the period of nine centuries from Âryabhaṭa's date, K.Y. 3600 (A.D. 499-500), to 4500 (A.D. 1399-1400). It would be well if all dates of inscriptions that have hitherto been set aside as irregular by epigraphists could be re-examined, seeing that the difference between the two systems of the *Ârya Siddhânta* constantly leads to differences in the computed positions of the sun and moon on the same civil day, and consequently to differences in the almanac; let alone the differences caused by the use of different Siddhântas.

Thus, to give an example. The civil day, Monday, 21 October A.D. 1090, was by the Ârya Siddhânta true system described as "Monday, 25 Tulâ, nija Âśvina kr. 10," while by the mean system it was "Monday, 27 Tulâ, Kârttika kr. 10." Thursday, 31 Oct., in the same year was by the true system "Thursday, 5 Vṛiśchika, Kârttika śukla 6," while by the mean system it was "Thursday, 7 Vṛiśchika, Mârgaśira śukla 5."

305. The present Tables are based on the First Ârya Siddhânta as amended by Lalla. The principal Table LXXVI is framed on the lines of the *Indian Calendar*, Table I, so as to meet the convenience of epigraphists who have become accustomed to the use of that work. The numbers of the columns are made to correspond in both Tables.

Results of calculation carried out by the present Tables will be found to correspond with those worked by use of Professor H. Jacobi's skeleton Tables published in Vol. XI above. There is no need for me to dwell on the great services he has rendered to the cause of Indian history and epigraphy. These are well known. All I have done is to follow in his footsteps,

[1] This note is reproduced here exactly as it was sent by Mons. G. Jouveau-Dubreuil; no corrections have been effected in it.

[2] [For Plate see the article on 'A Vâkâṭaka Inscription from Ganj.'—F. W. T.]

verify his figures to the best of my ability and apply the results to practical use. Any little differences that exist between us have been fully set forth and their cause explained.

Elements. Ārya Siddhānta, mean system.

306. (i) The length of the mean sidereal solar year is $365^d\ 6^h\ 12^m\ 30^s$, or $365^d.2586805$.

(ii) For the sun's mean motion per day, hour, etc., see Tables XLIII, XLIV, above, Vol. XIV.

(iii) The distance of mean moon from mean sun (our *a*), measured in 10,000ths of the circle, i.e. 10,000ths of the mean synodical revolution of the moon and excluding 12 whole revolutions, increases, during one sidereal solar year, from 0 to 3688·231484714. That is the advance of *a* in the year. Table LXIV A above, col. 3, shews this advance per day, and Table LXV the advance per hour, etc.

(iv) The value of *a* in mean reckoning corresponds to that of *t*, the tithi-index, in true reckoning. It shews what mean tithi was current at the moment in question.[1] In general calculation by the Tables this moment is the moment of mean sunrise at Laṅkā, taken as 6 A.M.

(v) In reckoning by 10,000ths of the circle the advance of *a* in one mean solar month is 307 352623726.

(vi) Each mean solar month consists of $30^d\ 10^h\ 31^m\ 2\frac{1}{4}^s$. The collective duration from the moment of mean Mēsha-saṁkrānti (the beginning of the mean solar year when the mean sun is at celestial long. 0°) to each separate saṁkrānti, or the moment when the mean sun enters each of the signs, is given in Table LXXVII.

(vii) The length of each mean lunar month is $29^d\ 12^h\ 44^m\ 2^s{\cdot}79$ or $29^d{\cdot}530587946$, during which the mean moon's distance from mean sun increases, in our circle reckoning, from 0 to 10,000. The length of one mean tithi, or one-thirtieth of the mean lunar synodic month, is $23^h\ 37^m\ 28^s{\cdot}09$, or $0^d{\cdot}984352931$; during which, in circle reckoning, the increase of *a* is $333{\cdot}\dot{3}$.

(viii) The *śōdhya*, or time-difference between the moments of arrival at celestial long. 0° of the true and mean suns, which moments are known respectively as the true and mean Mēsha-saṁkrāntis, is $2^d\ 3^h\ 32^m\ 30^s$, true Mēsha-saṁkrānti being the earlier.

The time of occurrence of mean Mēsha-saṁkrānti in every year is given in Table LXXVI, cols. 13 to 17.

(ix) The saṁvatsara name of the solar year is the same by both true and mean reckonings, except in the years A.D. 564-5, 905-6, 990-1, 1246-7 and 1331-2. A special footnote is appended to the main Table LXXVI in each case.

(x) There can be no suppression of a lunar month when calculation is made by the mean system; for the length of a mean solar month is greater than that of a mean lunar month, so that two mean solar saṁkrāntis cannot take place within the limits of one mean lunar month.

(xi) Let it be noted that no intercalation of a lunar month can take place unless, at mean sunrise of the day on which mean Mēsha-saṁkrānti took place, the value of *a* is more than 6280·4892, or unless at the moment of mean Mēsha-saṁkrānti the value of *a* is more than 6619·1211; the latter value being 10,000 − 3380·8789, the total increase of *a* from Mēsha- to Mīna-saṁkrānti, and the former being 6619·1211 − 338·6319, the latter value being the increase of *a* in 24 hours.

The 19-year intercalation cycle.

307 (*See Indian Calendar*, § *50, p. 29.*) By the mean system the cycle-sequence is found to work with almost perfect regularity. After four successive intercalations at intervals of 19 years each the intercalated lunar month gives way to the month preceding it. But there are

[1] The equations of sun and moon are not taken into account in mean reckoning.

two exceptions in the nine centuries embraced in Table LXXVI. Between A.D. 751 and 827 there is a run of five intercalary mean Pausha months, and between A.D. 1242 and 1318 there is a run of five intercalary mean Âśvina months.

In eleven instances the names of the mean intercalary months given in Table LXXVI differ from those stated in the *Indian Calendar*. These differences are due to the former calculations having been based on Professor Jacobi's earliest Tables published 30 years ago, while the present ones agree with the results of calculation made by his more recent elementary fixtures. Each difference is specially noted at foot of Table LXXVI.

The nakshatra.

308. In the mean system the position at any moment of the mean moon in the ecliptic circle, i.e. the mean moon's nakshatra, is found by adding her mean distance from the mean sun to the latter's longitude ; that is to say, by adding to the value of *s* (the mean sun's longitude) the value of *a* at the same moment as found by calculation for the mean tithi. All work by the Tables being in the first instance for the mean positions of sun and moon at mean sunrise of any day, Table LXXX provides the sun's mean long., *s*, in 10,000ths of the circle, for each period of 24-hours measured from the moment of mean Mêsha-saṁkrânti, while Table LXXXI states the same increase for fractions of the day. To obtain the value of *s* for mean sunrise of any day it is necessary to note first its value after the interval of days between the day of Mêsha-saṁkrânti and the given day (Table LXXX), and, since that value is measured from the moment of Mêsha-saṁkrânti and not from mean sunrise, afterwards to deduct from the value so obtained the increase during that fraction of the day (Table LXXXI). The result is the required *s*, or the mean sun's long. at mean sunrise of the given day. Then $s+a=n$, the nakshatra index required, or the mean moon's place in the ecliptic circle at mean sunrise of that day.

The Rule for work, then, is as follows. Find the value of a $(=t)$, the mean tithi-index at mean sunrise of the given day (*Example 2 below*). Note the serial number of the day as measured from Jan. 1. Deduct from this the serial number of the day of mean Mêsha-saṁkrânti (*Table LXXVI, col. 13, in brackets*). This gives the number of intervening days. Turn to Table LXXX and note the value of *s* against that interval of days. Deduct from this the mean sun's movement given in Table LXXXI during the hours and minutes stated in Table LXXVI, col. 17. The result is the required value of *s* at mean sunrise of the given day. Add *s* to *a*. This $= n$, the required nakshatra-index. Table LXVIII above, or Table VIII, *Indian Calendar*, gives the name of the nakshatra.

The Tables.

309. Table LXXVI corresponds to Table I *Indian Calendar* in formation and is to be used in the same way. Here the value of *a* is the value of *t*. It gives the tithi-index direct without further calculation.[1]

Table LXXVII shews the duration and collective duration of mean solar months, and the increase in the moon's phase, *a*, during each such month.

Table LXXVIII gives the value of *a* at the beginning of each Kaliyuga century.

Table LXXIX corresponds, with a necessary shift of position, to Table LXXIV above, the use of which is fully explained in my former papers, §§ 279, 301.

[1] To find the value of *a*, or *t*, i.e. the exact moon's phase, in 10,000ths of the circle, at any moment of any day, note its value at mean sunrise of the first civil day of the luni-solar year, as given in Table LXXVI (col. 23), and add its value for intervening days, hours, etc. (*Tables LXIV, LXV under heading a*).

Tables LXXVIII and LXXIX, with Table LXXIII above (under heading *a*), which gives the value of *a* at the beginning of each year of the Kaliyuga century, enable us to find the value of *a* at mean sunrise of the civil day Chaitra śukla 1 at the beginning of each luni-solar year. Tables LXXVIII and LXXIII yield the value of *a* at mean sunrise of the day on which mean Mēsha-saṁkrānti occurred; and Table LXXIX enables, by addition, the *a* for the interval of days between that day and the day Chaitra śukla 1 to be ascertained. [The same can be found by subtracting from the sum of the values obtained from Tables LXXVIII and LXXIII (col. *a*) the value for those intervening days given in Table LXIV above (*see Example 1*).]

The use of Tables LXXX and LXXXI is explained above (§ 308). They correspond, *mutatis mutandis*, with Tables XLVIII A, XLIX above used in calculation for the sun's true longitude.

310. The century-Table LXXVIII requires some further explanation. Its object is to determine the mean moon's phase, *a*, at mean sunrise of the opening civil day of each Kaliyuga century, i.e. the day on which mean Mēsha-saṁkrānti occurred at some time later on that day. Reference to Table LXXVI shews that this opening day occurred at the beginnings of centuries 36 and 37 K.Y. on a Sunday, and in centuries 38 to 45 on a Saturday. From Table I, *Indian Calendar*, by adding the *sōdhya* interval (*above, § 306, viii*) to the date and time there given for the moment of true Mēsha-saṁkrānti, we find that in centuries 46 to 48 it fell on a Friday. In the mean system, therefore, centuries 37 and 45 were defective centuries, while the rest were common.

Table LXXVIII corresponds to Table LXXII above, which concerns true solar years, and by the true system, i.e. calculation by the movements of true sun, the only defective century was century 42. This accounts for the difference between the two Tables.

It has been shewn above (§ 299, i) that the actual value of *a* at mean sunrise of Sunday, 21 March A.D. 499, on which day, 6 hours later, occurred the moment of mean Mēsha-saṁkrānti (mean sun at 0°) at the beginning of Kaliyuga century 36, was, in notation in 10,000ths of the circle, 7715·352496330. The values of *a* for later century-beginnings are found by addition to this of the century increases of *a*, common and defective as required.

EXAMPLES.

Example 1. To find the European day, week-day, and phase of mean moon, i.e. the mean tithi-index a (*which* = t, *the index*) *at mean sunrise of the first civil day of the luni-solar year; that is to say, of the day called "Chaitra śukla 1" of the year in question.*

[This example is given in order to enable any student to verify the entries in Table LXXVI, cols. 19-23. For ordinary date work the entries themselves afford all information.]

The mean new moon which marks the astronomical beginning of any mean lunar year is the new moon at the end of the lunar month Phālguna of the previous year. The moment of its occurrence is always earlier than the moment in the current year of mean Mēsha-saṁkrānti, the beginning of the mean solar year. The civil day next following the moment of the initial mean new moon of the year is called "Chaitra śukla 1," that tithi being current at mean sunrise of that civil day. Our tabular calculations being for mean sunrise, the value of *a* in Table LXXVI, col. 23, must always be between 0 and 333·$\dot{3}$, the last being the limit of the tithi.

To find its value for any year we must first calculate the value of *a* at mean sunrise on the day of occurrence of mean Mēsha-saṁkrānti from Tables LXXVIII and LXXIII (above) under heading *a*.

This done there are two processes by which the mean sunrise value of *a* on the day Chaitra śukla 1 can be obtained. One is to use Table LXIV, which, by *deducting* from the *a* of mean Mēsha-saṁkrānti-day mean sunrise (already found) the next lower value of *a* in the Table as given for the first 30 days, yields at once the interval of days between Chaitra śukla 1 and

Mēsha-saṁkrānti, the value of a at mean sunrise of the former, and the required week-day. The second process is, using Table LXXIX, to find such earlier day as by *adding* its a to the a of Mēsha-saṁkrānti, already found, will yield a result between 0 and 333·3̇. The Table then shews the interval of days between the two sunrises, and the week-day corresponding to Chaitra śukla 1.

A. Take for instance the year K.Y. 3725 expired, A.D. 624-25. Mean Mēsha-saṁkrānti occurred in that year (*Table LXXVI, cols. 13-17*) on Wed. 21 Mar.,—serial day 81, from Jan. 1. We take the value of a at mean sunrise at the beginning of the Kaliyuga century and at the beginning of the expired year from Tables LXXVIII and LXXIII respectively. The result gives the value of a at mean sunrise of Mēsha-saṁkrānti day in the given year.

	w-d.	*a.*
(*Table LXXVIII*). K.Y. cent. 37	(1)	6583·1816
(*Table LXXIII above*). K.Y. year 25	(3)	2047·6413
At mean sunrise on Wed. 21 Mar., the day of occurrence of mean Mēsha-saṁkrānti	(4)	8630·8229

Process 1.

(*Table LXIV above*). Next lower value of a in the first 30 days of the Table, i.e. that for 25 days . .	−(4)	−8465·7968
At mean sunrise of the day Chaitra śukla 1 . .	(0)	165·0261

This Chaitra śukla 1 civil day was (81−25=) Day 56, or (*Table IX, Indian Calendar, or LXIX above*) Sat. 25 Feb. A.D. 624.

Process 2.	*w-d.*	*a.*
At mean sunrise on Wed. 21 Mar., the day of mean Mēsha-saṁkrānti (*as above*)	(4)	8630·8229
(*Table LXXIX*). The only value of a which yields result between 0 and 333·3̇	+(3)	+1534·2032
At mean sunrise of the day Chaitra śukla 1 . .	(0)	165·0261

Table LXXIX shews that the interval of days was 25, and the result is in all respects the same as the former.

B. Calculation for the mean sunrise value of a on the day of mean Mēsha-saṁkrānti, the first step shewn in the above, by use of Tables LXXVIII and LXXIII sometimes results in the day found being not the actual day on which Mēsha-saṁkrānti took place but the day next to it. This is inevitable, seeing that only one Table has to stand for the odd years of all centuries. In such case the necessary adjustment must be made for one day's difference. The entries in Table LXXVI, cols. 13 to 17, are conclusive as to the actual day.

Take the year A.D. 625-26, K.Y. 3726 expired. In that year mean Mēsha-saṁkrānti occurred on Thurs. 21 Mar., serial day 80.

	w-d.	*a.*
(*Table LXXVIII*). K.Y. century 37	(1)	6583·1816
(Table LXXIII). K.Y. year 26	(5)	5986·9072
At mean sunrise of Friday, 22 Mar.	(6)	2570·0888
Deduct value for one day (*Table LXIV*) . . .	−(1)	−338·6319
At m. sunrise of Thurs. 21 Mar., the day of mean Mēsha-saṁkrānti	(5)	2231·4569

For the *a* of Chaitra śukla 1 and its day and week-day we use either of the two processes.

Process 1.	*w-d.*	*a.*
At m. sunrise of m. M. S.-day, Thurs. 21 Mar. (*Table LXIV above*). Next lower value of *a* in the first 30 days of the Table, viz. for 6 days' interval . . .	(5)	2231·4569
	−(6)	−2031·7912
At mean sunrise of Fri. 15 Mar., being the day Chaitra śukla 1 . . .	(6)	199·6657

Or, *Process 2.*	*w-d.*	*a.*
At m. sunrise of m. Mēsha-saṁk. day (*as above*) . .	(5)	2231·4569
Add (*Table LXXIX* for 6 days earlier) . . .	+(1)	+7968·2088
Result (*same as above*) . . .	(6)	199·6657

Example 2. To find the mean tithi-index **a** *for any day in the year, or any moment of any day.*

Table LXXVI, cols. 19-23, states the civil day, Chaitra śukla 1, for each year, its serial number from Jan. 1, its week-day, and its tithi-index *a* at mean sunrise. Calculate, from Table III *Indian Calendar* or Table LXIII above, the interval of whole days to mean sunrise on the given day, and, if necessary, the fraction of day subsequent to that sunrise. Add the increment of *a* for whole days from Table LXIV, and for fractions of the day from Table LXV, to the *a* given in Table LXXVI.

Whole numbers may always be used for whole days, the decimals being only resorted to for close cases and when the calculation includes a fraction of a day.

E.g. Required the tithi-index at mean sunrise on Āshāḍha śukla 4 in the year corresponding to A.D. 625-26; and at $8^h\ 20^m\ 15^s$ after m. sunrise on that day.

	d.	*w-d.*	*a.*
Table LXXVI. Chait. śuk. 1, mean sunrise .	(74)	(6)	199·6657
Tables LXIII A, LXIV. Interval to Āsh. śuk. 4, and increase of *a* . . .	(91)	(0)	815·5005
At mean sunrise on Āsh. śuk. 4 day . . .	(165)	(6)	1015·1662

Day 165 was (Table IX, *Indian Calendar, or Table LXIX above*) 14 June A.D. 625 (6) = Friday. *a* = 1015 shews (*Table VIII or LXVIII*) that śukla 4 was current at mean sunrise of that day.

For the specific hour mentioned—

		a.
At mean sunrise on that day . . .		1015·1662
(*Table LXV*) . . .	8^h	112·8773
	20^m	4·7032
	15^s	0·0588
At $8^h\ 20^m\ 15^s$ after mean sunrise . . .	*a* =	1132·8055

Example 3. To find **a** *(the tithi-index, or phase of mean moon) at each of the solar saṁkrāntis in the year (the moments of the mean sun's entrance into the several signs), and to determine whether an intercalation of a lunar month took place during the year.*

Table LXXVI, cols. 13, 14, 17, shews the day and time of occurrence of mean Mêsha-saṁkrânti (mean sun at long. 0°) in each year, and Example 1 shews how to find the value of *a* at mean sunrise of that day. To that value must be added from Table LXV the increment of *a* during the interval from mean sunrise to moment of saṁkrânti. The advance of *a* during each mean solar month, i.e. from each mean saṁkrânti to the next (*Table LXXVII, col. 4*) is 307·3526. The work may be carried out by use of whole numbers, except when a case is very close. This occurs when a waning moon is very near 10,000, or when a waxing moon is very near 0.

Required the above details for the years noted in Examples 1, 2, viz. A.D. 624-5 and 625-6.

In A.D. 624-25 mean Mêsha-saṁkrânti took place 14h 2m 30s after mean sunrise. In A.D. 625-26 it took place 20h 15m 0s after mean sunrise (*Table LXXVI, cols. 13-17*).

	a.
A.D. 624-25. Value of *a* at m. sunrise on mean Mêsha-saṁkrânti-day, as already found (Example 1) . . .	8630·8229
(*Table LXV*). Increase of *a* in 14h	197·5353
Ditto 2m	0·4703
Ditto 30s	0·1176
Exact value of *a* at moment of mean Mêsha-saṁkrânti . .	8828·9461
A.D. 625-26. Value of *a* at m. sunrise of mean Mêsha-saṁkrânti-day as found	2231·4569
(*Table LXV*). Increase of *a* in 20h	282·1932
Ditto 15m	3·5274
Exact value of *a* at moment of mean Mêsha-saṁkrânti . .	2517·1775

For the several saṁkrântis in each year we work here roughly with whole numbers only, adding successively the increase of *a* in 1 solar month.

	A.D. 624-25	A.D. 625-26
At Mêsha-saṁkr. . .	*a*=8829	2517
	307	307
At Vṛishabha-saṁkr. . .	9136	2824
	307	307
At Mithuna-saṁkr. . .	9443	3131
	307	307
At Karka-saṁkr. . . .	9750	3438
	307	307
At Siṁha-saṁkr. . . .	57	3745
	etc.	etc

In A.D. 624-25 it is seen that the mean moon was waning at the Karka-saṁkrânti and waxing at the Siṁha-saṁkrânti, proving an intercalation of a lunar month, which month (*see Table LXXVII, col. 1*) was Śrâvaṇa. Actually *a* at Siṁha-saṁkrânti was 58 36.

In A.D. 625-26 the small value of *a* at the moment of Mēsha-saṁkrānti shews that there could have been no intercalation in that year (*see above*, § *306*, *xi*).

Example 4. To find the mean moon's nakshatra, or her place in the ecliptic circle at any moment.

(*See* § *308 above*.) We have to find the value of *s*, the sun's mean long., at the given moment and the value at the same moment of *a*, the index of the mean tithi. *s* + *a* = *n*, the index of the nakshatra. I assume that, as usual, the values wanted are those at mean sunrise on the given day; for later moments they can easily be found, from Table LXV for *a*, and from Table LXXXI for *s*. The example here given will shew the process of work.

Required the nakshatra at mean sunrise on the day referred to in Example 2, viz. Āshāḍha śukla 4 in K.Y. 3726, which was proved to be 14 June A.D. 625, and on which day at mean sunrise the value of *a* was found to be 1015·1662. The day, measured from Jan. 1, was serial number 165. In that year mean Mēsha-saṁkrānti took place (*Table LXXVI*) on Day 80 at 20^h 15^m after mean sunrise. The interval of whole days between 20^h 15^m after mean sunrise on the day of Mēsha-saṁkrānti and 20^h 15^m after mean sunrise on the given day is (165 – 80 =) 85.

(*Table LXXX*). Interval of 85 days		2327·1179
Less (*Table LXXXI*) for 20^h . .	22·8149	
for 15^m . .	0·2852	
	23·1001 . .	– 23·1001
At mean sunrise on the day Āshāḍha śuk. 4, . .		*s* = 2304·0178
Add *a*, as found for that mean sunrise		1015·1662
At mean sunrise on that day (= 14 June) . .		*n* = 3319·1840

Table VIII *Indian Calendar*, or Table LXVIII above, shews that the moon was then in the nakshatra Āślēshā by the equal-space system and by Garga, but in Maghā by the Brāhma Siddhānta.[1]

The value of *n*, 3319·1840, in 10,000ths of the circle, can be converted into degrees, if required, by Table XLV B, above. It = 119° 29′ 26″. That was the mean moon's place.

Example 5. The lagna. (*See Indian Chronography*, § *193*, *p. 74*, *and Example 63*, *p. 127*.) Required to ascertain at what hour on the day Āshāḍha śuk. 4 K.Y. 3726, or 14 June A.D. 625, the sign Tulā became lagna.

At mean sunrise the sun's mean long. *s* was (*Example 4*) 2304·0178, roughly (*Table XLV above*) 82° 57′. The first point of Tulā (Libra) (*Indian Chronography*, *Table XXII*) is 180°. 180° – 82° 57′ = 97° 3′. 97° × 4 = 388^m, or 6^h 28^m. 3′ × 4 = 12^s. The first point of Tulā, therefore, was lagna at 6^h 28^m 12^s after mean sunrise on the day in question. It lasted for 2 hours, when Vṛiśchika (Scorpio) became lagna.

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[1] As to these systems see *Indian Calendar*, § 38, p. 21; *Indian Chronography*, § 112 etc.

TABLE LXXVI.

Mean System Table, First Arya Siddhānta.

TABLE

MEAN SYSTEM TABLE,

Numbers of columns conform

(*Cols. 1 to 4.*)—The years herein stated are the *current* years corresponding

(*Cols. 6 and 7.*)—*Saṁvatsara-names of mean solar years in italics shew where*

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
						JOVIAN SAṀVATSARA.		
Kali.	Saka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3601	422	557			499-500	9 Yuvan		9 Mārgaśira
3602	423	558			*500-01	10 Dhātṛi		...
3603	424	559			501-02	11 Īśvara		...
3604	425	560			502-03	12 Bahudhānya		5 Śrāvaṇa
3605	426	561			503-04	13 Pramāthin		...
3606	427	562			*504-05	14 Vikrama		...
3607	428	563			505-06	15 Vṛisha		2 Vaiśākha
3608	429	564			506-07	16 Chitrabhānu		...
3609	430	565			507-08	17 Subhānu		10 Pausha
3610	431	566			*508-09	18 Tāraṇa		...
3611	432	567			509-10	19 Pārthiva		...
3612	433	568			510-11	20 Vyaya		7 Āśvina
3613	434	569			511-12	21 Sarvajit		...
3614	435	570			*512-13	22 Sarvadhārin		...
3615	436	571			513-14	23 Virōdhin		3 Jyēshṭha
3616	437	572			514-15	24 Vikṛita		...
3617	438	573			515-16	25 Khara		12 Phālguna
3618	439	574			*516-17	26 Nandana		...
3619	440	575			517-18	27 Vijaya		...
3620	441	576			518-19	28 Jaya		8 Kārttika

LXXVI.

First Ārya Siddhānta.

to Table I, "Indian Calendar."

to the A.D. years in col. 5; as in Table I, "Indian Calendar."

differences exist from Sūrya Siddhanta nomenclature in true solar years.

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							Kali year.
Mean solar year.			Mean luni-solar year (mean sunrise of civil day on which Chaitra Sukla 1 ends).				
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.		Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).	
13	14	17		19	20	23	1
		H. M. S.					
21 Mar. (80)	1 Sun.	6 0 0		27 Feb. (58)	0 Sat.	265·4513	3601
20 Mar. (80)	2 Mon.	12 12 30		17 Mar. (77)	6 Fri.	300·0909	3602
20 Mar. (79)	3 Tues.	18 25 0		6 Mar. (65)	3 Tues.	175·7743	3603
21 Mar. (80)	5 Thur.	0 37 30		23 Feb. (54)	0 Sat.	51·4577	3604
21 Mar. (80)	6 Fri.	6 50 0		14 Mar. (73)	6 Fri.	86·0973	3605
20 Mar. (80)	0 Sat.	13 2 30		3 Mar. (63)	4 Wed.	300·4125	3606
20 Mar. (79)	1 Sun.	19 15 0		20 Feb. (51)	1 Sun.	176·0959	3607
21 Mar. (80)	3 Tues.	1 27 30		11 Mar. (70)	0 Sat.	210·7356	3608
21 Mar. (80)	4 Wed.	7 40 0		28 Feb. (59)	4 Wed.	86·4189	3609
20 Mar. (80)	5 Thur.	13 52 30		18 Mar. (78)	3 Tues.	121·0586	3610
20 Mar. (79)	6 Fri.	20 5 0		7 Mar. (66)	0 Sat.	9996·7419†	3611
21 Mar. (80)	1 Sun.	2 17 30		25 Feb. (56)	5 Thur.	211·0572	3612
21 Mar. (80)	2 Mon.	8 30 0		16 Mar. (75)	4 Wed.	245·6968	3613
20 Mar. (80)	3 Tues.	14 42 30		4 Mar. (64)	1 Sun.	121·3802	3614
20 Mar. (79)	4 Wed.	20 55 0		21 Feb. (52)	5 Thur.	9997·0635†	3615
21 Mar. (80)	6 Fri.	3 7 30		12 Mar. (71)	4 Wed.	31·7031	3616
21 Mar. (80)	0 Sat.	9 20 0		2 Mar. (61)	2 Mon.	246·0185	3617
20 Mar. (80)	1 Sun.	15 32 30		20 Mar. (80)	1 Sun.	280·6581	3618
20 Mar. (79)	2 Mon.	21 45 0		9 Mar. (68)	5 Thur.	156·3414	3619
21 Mar. (80)	4 Wed.	3 57 30		26 Feb. (57)	2 Mon.	32·0248	3620

† As a mean tithi Chaitra Sukla 1 was suppressed. The civil day corresponding to it, *i.e.*, the first day of the mean luni-solar year, was as given in cols. 19, 20.

TABLE

CONCURRENT YEAR.								
Kali.	Saka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	Mean Intercalated (adhika) lunar month.
1	2	3	3a	4	5	6	7	8a
3621	442	577			519-20	29 Manmatha . .		...
3622	443	578			*520-21	30 Durmukha . .		...
3623	444	579			521-22	31 Hēmalamba . .		5 Śrāvaṇa .
3624	445	580			522-23	32 Vilamba . . .		...
3625	446	581			523-24	33 Vikārin . . .		...
3626	447	582			*524-25	34 Śārvarin . . .		1 Chaitra .
3627	448	583			525-26	35 Plava . . .		...
3628	449	584			526-27	36 Śubhakṛit . .		10 Pausha .
3629	450	585			527-28	37 Śōbhana . . .		...
3630	451	586			*528-29	38 Krōdhin . . .		...
3631	452	587			529-30	39 Viśvāvasu . . .		7 Āśvina .
3632	453	588			530-31	40 Parābhava . .		...
3633	454	589			531-32	41 Plavaṅga . . .		...
3634	455	590			*532-33	42 Kīlaka . . .		3 Jyēshṭha .
3635	456	591			533-34	43 Saumya . . .		...
3636	457	592			534-35	44 Sādhāraṇa . .		12 Phālguna .
3637	458	593			535-36	45 Virōdhakṛit . .		...
3638	459	594			*536-37	46 Paridhāvin . .		...
3639	460	595			537-38	47 Pramādin . .		8 Kārttika .
3640	461	596			538-39	48 Ānanda . . .		...
3641	462	597			539-40	49 Rākshasa . . .		...
3642	463	598			*540-41	50 Anala . . .		5 Śrāvaṇa .
3643	464	599			541-42	51 Piṅgala . . .		...
3644	465	600			542-43	52 Kālayukta . .		...
3645	466	601			543-44	53 Siddhārthin . .		1 Chaitra .

LXXVI—*Contd.*

I Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							
Mean solar year.			Mean luni-solar year (mean sunrise of civil day on which Chaitra Śukla 1 ends).			Kali year.	
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here=*t*, the index of the tithi).		
13	14	17		19	20	23	1
		H. M. S.					
21 Mar. (80) .	5 Thur.	10 10 0		17 Mar. (76)	1 Sun.	66·6644	3621
20 Mar. (80) .	6 Fri.	16 22 30		6 Mar. (66)	6 Fri.	280·9797	3622
20 Mar. (79) .	0 Sat.	22 35 0		23 Feb. (54)	3 Tues.	156·6631	3623
21 Mar. (80) .	2 Mon.	4 47 30		14 Mar. (73)	2 Mon.	191·3027	3624
21 Mar. (80) .	3 Tues.	11 0 0		3 Mar. (62)	6 Fri.	66·9860	3625
20 Mar. (80) .	4 Wed.	17 12 30		21 Feb. (52)	4 Wed.	281·3013	3626
20 Mar. (79) .	5 Thur.	23 25 0		11 Mar. (70)	3 Tues.	315·9409	3627
21 Mar. (80) .	0 Sat.	5 37 30		28 Feb. (59)	0 Sat.	191·6243	3628
21 Mar. (80) .	1 Sun.	11 50 0		19 Mar. (78)	6 Fri.	226·2640	3629
20 Mar. (80) .	2 Mon.	18 2 30		7 Mar. (67)	3 Tues.	101·9473	3630
21 Mar. (80) .	4 Wed.	0 15 0		25 Feb. (56)	1 Sun.	316·2626	3631
21 Mar. (80) .	5 Thur.	6 27 30		15 Mar. (74)	6 Fri.	12·2703	3632
21 Mar. (80) .	6 Fri.	12 40 0		5 Mar. (64)	4 Wed.	226·5856	3633
20 Mar. (80) .	0 Sat.	18 52 30		22 Feb. (53)	1 Sun.	102·2690	3634
21 Mar. (80) .	2 Mon.	1 5 0		12 Mar. (71)	0 Sat.	136·9086	3635
21 Mar. (80) .	3 Tues.	7 17 30		1 Mar. (60)	4 Wed.	12·5920	3636
21 Mar. (80) .	4 Wed.	13 30 0		20 Mar. (79)	3 Tues.	47·2316	3637
20 Mar. (80) .	5 Thur.	19 42 30		9 Mar. (69)	1 Sun.	261·5469	3638
21 Mar. (80) .	0 Sat.	1 55 0		26 Feb. (57)	5 Thur.	137·2303	3639
21 Mar. (80) .	1 Sun.	8 7 30		17 Mar. (76)	4 Wed.	171·8699	3640
21 Mar. (80) .	2 Mon.	14 20 0		6 Mar. (65)	1 Sun.	47·5533	3641
20 Mar. (80) .	3 Tues.	20 32 30		24 Feb. (55)	6 Fri.	261·8686	3642
21 Mar. (80) .	5 Thur.	2 45 0		14 Mar. (73)	5 Thur.	296·5082	3643
21 Mar. (80) .	6 Fri.	8 57 30		3 Mar. (62)	2 Mon.	172·1916	3644
21 Mar. (80) .	0 Sat.	15 10 0		20 Feb. (51)	6 Fri.	47·8749	3645

TABLE

CONCURRENT YEAR.								
						JOVIAN SAṀVATSARA.		Mean Intercalated (adhika) lunar month. 108030
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3646	467	602			*544-45	54 Raudra . . .		...
3647	468	603			545-46	55 Durmati . . .		10 Pausha .
3648	469	604			546-47	56 Dundubhi . .		...
3649	470	605			547-48	57 Rudhirōdgārin . .		...
3650	471	606			*548-49	58 Raktāksha . .		6 Bhādrapada
3651	472	607			549-50	59 Krōdhana . .		...
3652	473	608			550-51	60 Kshaya . . .		...
3653	474	609			551-52	1 Prabhava . . .		3 Jyēshṭha .
3654	475	610			*552-53	2 Vibhava . . .		...
3655	476	611			553-54	3 Śukla . . .		11 Māgha .
3656	477	612			554-55	4 Pramōda . . .		...
3657	478	613			555-56	5 Prajāpati . . .		...
3658	479	614			*556-57	6 Aṅgiras . . .		8 Kārttika .
3659	480	615			557-58	7 Śrīmukha . . .		...
3660	481	616			558-59	8 Bhāva . . .		...
3661	482	617			559-60	9 Yuvan . . .		4 Āshāḍha .
3662	483	618			*560-61	10 Dhātri . . .		...
3663	484	619			561-62	11 Īśvara . . .		...
3664	485	620			562-63	12 Bahudhānya . .		1 Chaitra .
3665	486	621			563-64	13 Pramāthin† . .		...
3666	487	622			*564-65	15 *Vṛisha* . . .		10 Pausha .
3667	488	623			565-66	16 *Chitrabhānu* . .		...
3668	489	624			566-67	17 *Subhānu* . . .		...
3669	490	625			567-68	18 *Tāraṇa* . . .		6 Bhādrapada.
3670	491	626			*568-69	19 Pārthiva . . .		...

† By I Ārya Siddhānta *mean* system 14 Vikrama was expunged, and A.D. 564-65 corresponded to 15 Vṛisha. By the same authority *true* system A.D. 564-65 corresponded to 14 Vikrama, and 15 Vṛisha was expunged. A.D. 565-66 was 16 Chitrabhānu by both systems.

LXXVI—*Contd.*

1 Ârya Siddhânta, mean system.

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrânti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
20 Mar. (80) . .	1 Sun. .	21	22	30	10 Mar. (70) .	5 Thur. .	82·5145	3646
21 Mar. (80) . .	3 Tues. .	3	35	0	28 Feb. (59) .	3 Tues. .	296·8298	3647
21 Mar. (80) . .	4 Wed. .	9	47	30	19 Mar. (78) .	2 Mon. .	331·4694	3648
21 Mar. (80) . .	5 Thur. .	16	0	0	8 Mar. (67) .	6 Fri. .	207·1528	3649
20 Mar. (80) . .	6 Fri. .	22	12	30	25 Feb. (56) .	3 Tues. .	82·8361	3650
21 Mar. (80) . .	1 Sun. .	4	25	0	15 Mar. (74) .	2 Mon. .	117·4757	3651
21 Mar. (80) . .	2 Mon. .	10	37	30	5 Mar. (64) .	0 Sat. .	331·7910	3652
21 Mar. (80) . .	3 Tues. .	16	50	0	22 Feb. (53) .	4 Wed. .	207·4744	3653
20 Mar. (80) . .	4 Wed. .	23	2	30	12 Mar. (72) .	3 Tues. .	242·1140	3654
21 Mar. (80) . .	6 Fri. .	5	15	0	1 Mar. (60) .	0 Sat. .	117·7974	3655
21 Mar. (80) . .	0 Sat. .	11	27	30	20 Mar. (79) .	6 Fri. .	152·4370	3656
21 Mar. (80) . .	1 Sun. .	17	40	0	9 Mar. (68) .	3 Tues. .	28·1204	3657
20 Mar. (80) . .	2 Mon. .	23	52	30	27 Feb. (58) .	1 Sun. .	242·4357	3658
21 Mar. (80) . .	4 Wed. .	6	5	0	17 Mar. (76) .	0 Sat. .	277·0753	3659
21 Mar. (80) . .	5 Thur. .	12	17	30	6 Mar. (65) .	4 Wed. .	152·7587	3660
21 Mar. (80) . .	6 Fri. .	18	30	0	23 Feb. (54) .	1 Sun. .	28·4421	3661
21 Mar. (81) . .	1 Sun. .	0	42	30	13 Mar. (73) .	0 Sat. .	63·0817	3662
21 Mar. (80) . .	2 Mon. .	6	55	0	3 Mar. (62) .	5 Thur. .	277·3970	3663
21 Mar. (80) . .	3 Tues. .	13	7	30	20 Feb. (51) .	2 Mon. .	153·0803	3664
21 Mar. (80) . .	4 Wed. .	19	20	0	11 Mar. (70) .	1 Sun. .	187·7200	3665
21 Mar. (81) . .	6 Fri. .	1	32	30	28 Feb. (59) .	5 Thur. .	63·4034	3666
21 Mar. (80) . .	0 Sat. .	7	45	0	18 Mar. (77) .	4 Wed. .	98·0430	3667
21 Mar. (80) . .	1 Sun. .	13	57	30	8 Mar. (67) .	2 Mon. .	312·3582	3668
21 Mar. (80) . .	2 Mon. .	20	10	0	25 Feb. (56) .	6 Fri. .	188·0416	3669
21 Mar (81) . .	4 Wed. .	2	22	30	15 Mar. (75) .	5 Thur. .	222·6813	3670

TABLE

CONCURRENT YEAR.								
						Jovian saṁvatsara.		Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3671	492	627			569-70	20 Vyaya . . .		...
3672	493	628			570-71	21 Sarvajit . . .		3 Jyēshṭha .
3673	494	629			571-72	22 Sarvadhārin . .		...
3674	495	630			*572-73	23 Virōdhin . . .		11 Māgha .
3675	496	631			573-74	24 Vikṛita . . .		...
3676	497	632			574-75	25 Khara . . .		...
3677	498	633			575-76	26 Nandana . . .		8 Kārttika .
3678	499	634			*576-77	27 Vijaya . . .		...
3679	500	635			577-78	28 Jaya . . .		...
3680	501	636			578-79	29 Manmatha . .		4 Āshāḍha .
3681	502	637			579-80	30 Durmukha . .		...
3682	503	638			*580-81	31 Hēmalamba . .		...
3683	504	639			581-82	32 Vilamba . . .		1 Chaitra .
3684	505	640			582-83	33 Vikārin . . .		...
3685	506	641			583-84	34 Śārvarin . . .		9 Mārgaśira .
3686	507	642			*584-85	35 Plava . . .		...
3687	508	643			585-86	36 Śubhakṛit . .		...
3688	509	644			586-87	37 Śōbhana . . .		6 Bhādrapada.
3689	510	645			587-88	38 Krōdhin . . .		...
3690	511	646			*588-89	39 Viśvāvasu . .		...
3691	512	647			589-90	40 Parābhava . .		2 Vaiśākha .
3692	513	648			590-91	41 Plavaṅga . .		...
3693	514	649			591-92	42 Kīlaka . . .		11 Māgha .
3694	515	650			*592-93	43 Saumya . . .		...
3695	516	651			593-94	44 Sādhāraṇa . .		...

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
21 Mar. (80) .	5 Thur.	8	35	0	4 Mar. (63)	2 Mon.	98·3646	3671
21 Mar. (80) .	6 Fri.	14	47	30	22 Feb. (53)	0 Sat.	312·6799	3672
21 Mar. (80) .	0 Sat	21	0	0	12 Mar. (71)	5 Thur.	8·6876	3673
21 Mar. (81) .	2 Mon.	3	12	30	1 Mar. (61)	3 Tues.	223·0029	3674
21 Mar. (80) .	3 Tues.	9	25	0	20 Mar. (79)	2 Mon.	257·6425	3675
21 Mar. (80) .	4 Wed.	15	37	30	9 Mar. (68)	6 Fri.	133·3259	3676
21 Mar. (80)	5 Thur.	21	50	0	26 Feb. (57)	3 Tues.	9·0092	3677
21 Mar. (81) .	0 Sat.	4	2	30	16 Mar. (76)	2 Mon.	43·6488	3678
21 Mar. (80) .	1 Sun.	10	15	0	6 Mar. (65)	0 Sat.	257·9641	3679
21 Mar. (80) .	2 Mon.	16	27	30	23 Feb. (54)	4 Wed.	133·6476	3680
21 Mar. (80)	3 Tues.	22	40	0	14 Mar. (73)	3 Tues.	168·2871	3681
21 Mar. (81) .	5 Thur.	4	52	30	2 Mar. (62)	0 Sat.	43·9705	3682
21 Mar. (80) .	6 Fri.	11	5	0	20 Feb. (51)	5 Thur.	258·2857	3683
21 Mar. (80) .	0 Sat.	17	17	30	11 Mar. (70)	4 Wed.	292·9254	3684
21 Mar. (80) .	1 Sun.	23	30	0	28 Feb. (59)	1 Sun.	168·6087	3685
21 Mar. (81) .	3 Tues.	5	42	30	18 Mar. (78)	0 Sat.	203·2484	3686
21 Mar. (80) .	4 Wed.	11	55	0	7 Mar. (66)	4 Wed.	78·9317	3687
21 Mar. (80) .	5 Thur.	18	7	30	25 Feb. (56)	2 Mon.	293·2470	3688
22 Mar. (81) .	0 Sat.	0	20	0	16 Mar. (75)	1 Sun.	327·8867	3689
21 Mar. (81) .	1 Sun.	6	32	30	4 Mar. (64)	5 Thur.	203·5700	3690
21 Mar. (80) .	2 Mon.	12	45	0	21 Feb. (52)	2 Mon.	79·2534	3691
21 Mar. (80) .	3 Tues.	18	57	30	12 Mar. (71)	1 Sun.	113·8930	3692
22 Mar. (81) .	5 Thur.	1	10	0	2 Mar. (61)	6 Fri.	328·2083	3693
21 Mar. (81) .	6 Fri.	7	22	30	19 Mar. (79)	4 Wed.	24·2160	3694
21 Mar. (80) .	0 Sat.	13	35	0	9 Mar. (68)	2 Mon.	238·5313	3695

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3696	517	652	1		594-95	45 Virōdhakṛit . .		7 Āśvina
3697	518	653	2		595-96	46 Paridhāvin . .		...
3698	519	654	3		*596-97	47 Pramādin . .		...
3699	520	655	4		597-98	48 Ānanda . . .		4 Āshāḍha .
3700	521	656	5		598-99	49 Rākshasa . . .		...
3701	522	657	6		599-600	50 Anala . . .		12 Phālguna .
3702	523	658	7		*600-01	51 Piṅgala . . .		...
3703	524	659	8		601-02	52 Kālayukta . .		...
3704	525	660	9		602-03	53 Siddhārthin . .		9 Mārgaśira .
3705	526	661	10		603-04	54 Raudra . . .		...
3706	527	662	11		*604-05	55 Durmati . .		...
3707	528	663	12		605-06	56 Dundubhi . .		6 Bhādrapada.
3708	529	664	13		606-07	57 Rudhirōdgārin. . .		...
3709	530	665	14		607-08	58 Raktāksha . .		...
3710	531	666	15		*608-09	59 Krōdhana . .		2 Vaiśākha .
3711	532	667	16		609-10	60 Kshaya . . .		...
3712	533	668	17		610-11	1 Prabhava . . .		11 Māgha .
3713	534	669	18		611-12	2 Vibhava . . .		...
3714	535	670	19		*612-13	3 Śukla . . .		...
3715	536	671	20		613-14	4 Pramōda . . .		7 Āśvina .
3716	537	672	21		614-15	5 Prajāpati . . .		...
3717	538	673	22		615-16	6 Aṅgiras . . .		...
3718	539	674	23		*616-17	7 Śrīmukha . . .		4 Āshāḍha
3719	540	675	24		617-18	8 Bhāva . . .		...
3720	541	676	25		618-19	9 Yuvan . . .		12 Phālguna

LXXVI—*Contd.*

1 Arya Siddhânta, mean system.

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	a (here = t, the index of the tithi).	
13	14	17	19	20	23	1
		H. M. S.				
21 Mar. (80) .	1 Sun.	19 47 30	26 Feb. (57)	6 Fri.	114·2147	3696
22 Mar. (81) .	3 Tues.	2 0 0	17 Mar. (76)	5 Thur.	148·8543	3697
21 Mar. (81) .	4 Wed.	8 12 30	5 Mar. (65)	2 Mon.	24·5377	3698
21 Mar. (80) .	5 Thur.	14 25 0	23 Feb. (54)	0 Sat.	238·8530	3699
21 Mar. (80) .	6 Fri.	20 37 30	14 Mar. (73)	6 Fri.	273·4926	3700
22 Mar. (81) .	1 Sun.	2 50 0	3 Mar. (62)	3 Tues.	149·1760	3701
21 Mar. (81) .	2 Mon.	9 2 30	21 Mar. (81)	2 Mon.	183·8156	3702
21 Mar. (80) .	3 Tues.	15 15 0	10 Mar. (69)	6 Fri.	59·4990	3703
21 Mar. (80) .	4 Wed.	21 27 30	28 Feb. (59)	4 Wed.	273·8142	3704
22 Mar. (81) .	6 Fri.	3 40 0	19 Mar. (78)	3 Tues.	308·4539	3705
21 Mar. (81) .	0 Sat.	9 52 30	7 Mar. (67)	0 Sat.	184·1373	3706
21 Mar. (80) .	1 Sun.	16 5 0	24 Feb. (55)	4 Wed.	59·8207	3707
21 Mar. (80) .	2 Mon.	22 17 30	15 Mar. (74)	3 Tues.	94·4603	3708
22 Mar. (81) .	4 Wed.	4 30 0	5 Mar. (64)	1 Sun.	308·7756	3709
21 Mar. (81) .	5 Thur.	10 42 30	22 Feb. (53)	5 Thur.	184·4589	3710
21 Mar. (80) .	6 Fri.	16 55 0	12 Mar. (71)	4 Wed.	219·0985	3711
21 Mar. (80) .	0 Sat.	23 7 30	1 Mar. (60)	1 Sun.	94·7819	3712
22 Mar. (81) .	2 Mon.	5 20 0	20 Mar. (79)	0 Sat.	129·4215	3713
21 Mar. (81) .	3 Tues.	11 32 30	8 Mar. (68)	4 Wed.	5·1049	3714
21 Mar. (80) .	4 Wed.	17 45 0	26 Feb. (57)	2 Mon.	219·4201	3715
21 Mar. (80) .	5 Thur.	23 57 30	17 Mar. (76)	1 Sun.	254·0597	3716
22 Mar. (81) .	0 Sat.	6 10 0	6 Mar. (65)	5 Thur.	129·7432	3717
21 Mar. (81)	1 Sun.	12 22 30	23 Feb. (54)	2 Mon.	5·4266	3718
21 Mar. (80) .	2 Mon.	18 35 0	13 Mar. (72)	1 Sun.	40·0661	3719
22 Mar. (81) .	4 Wed	0 47 30	3 Mar. (62)	6 Fri.	254·3814	3720

TABLE

Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian saṁvatsara. Southern system.	Jovian saṁvatsara. Northern system.	Mean Intercalated (adhika) lunar month.
1	2	3	3a	4	5	6	7	8a
3721	542	677	26		619-20	10 Dhātṛi . . .		...
3722	543	678	27		*620-21	11 Īśvara . . .		...
3723	544	679	28		621-22	12 Bahudhānya . .		9 Mārgaśira .
3724	545	680	29		622-23	13 Pramāthin . .		...
3725	546	681	30		623-24	14 Vikrama . . .		...
3726	547	682	31		*624-25	15 Vṛisha . . .		5 Śrāvaṇa .
3727	548	683	32		625-26	16 Chitrabhānu . .		...
3728	549	684	33		626-27	17 Subhānu . . .		...
3729	550	685	34		627-28	18 Tāraṇa . . .		2 Vaiśākha .
3730	551	686	35		*628-29	19 Pārthiva . . .		...
3731	552	687	36		629-30	20 Vyaya . . .		10 Pausha .
3732	553	688	37		630-31	21 Sarvajit . . .		...
3733	554	689	38		631-32	22 Sarvadhārin . .		...
3734	555	690	39		*632-33	23 Virōdhin . . .		7 Āśvina .
3735	556	691	40		633-34	24 Vikṛita . . .		...
3736	557	692	41		634-35	25 Khara . . .		...
3737	558	693	42		635-36	26 Nandana . . .		3 Jyēshṭha .
3738	559	694	43		*636-37	27 Vijaya . . .		...
3739	560	695	44		637-38	28 Jaya . . .		12 Phālguna .
3740	561	696	45		638-39	29 Manmatha . .		...
3741	562	697	46		639-40	30 Durmukha . .		...
3742	563	698	47		*640-41	31 Hēmalamba . .		9 Mārgaśira .
3743	564	699	48		641-42	32 Vilamba . . .		...
3744	565	700	49		642-43	33 Vikārin . . .		...
3745	566	701	50		643-44	34 Śārvarin . . .		5 Śrāvaṇa .

LXXVI—*Contd.*

I Ārya Siddhānta, mean system

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mésha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).	
13	14	17	19	20	23	1
		H. M. S.				
22 Mar. (81) . .	5 Thur. .	7 0 0	22 Mar. (81) .	5 Thur. .	289·0209	3721
21 Mar. (81) . .	6 Fri. .	13 12 30	10 Mar. (70) .	2 Mon. .	164·7044	3722
21 Mar. (80) . .	0 Sat. .	19 25 0	27 Feb. (58) .	6 Fri. .	40·3877	3723 [1]
22 Mar. (81) . .	2 Mon. .	1 37 30	18 Mar. (77) .	5 Thur. .	75·0274	3724
22 Mar. (81) . .	3 Tues. .	7 50 0	8 Mar. (67) .	3 Tues. .	289·3427	3725
21 Mar. (81) . .	4 Wed. .	14 2 30	25 Feb. (56) .	0 Sat. .	165·0261	3726
21 Mar. (80) . .	5 Thur. .	20 15 0	15 Mar. (74) .	6 Fri. .	199·6657	3727
22 Mar. (81) . .	0 Sat. .	2 27 30	4 Mar. (63) .	3 Tues. .	75·3491	3728
22 Mar. (81) . .	1 Sun. .	8 40 0	22 Feb. (53) .	1 Sun. .	289·6643	3729
21 Mar. (81) . .	2 Mon. .	14 52 30	12 Mar. (72) .	0 Sat. .	324·3039	3730
21 Mar. (80) . .	3 Tues. .	21 5 0	1 Mar. (60) .	4 Wed. .	199·9873	3731
22 Mar. (81) . .	5 Thur. .	3 17 30	20 Mar. (79) .	3 Tues. .	234·6269	3732
22 Mar. (81) . .	6 Fri. .	9 30 0	9 Mar. (68) .	0 Sat. .	110·3103	3733
21 Mar. (81) . .	0 Sat. .	15 42 30	27 Feb. (58) .	5 Thur. .	324·6256	3734
21 Mar. (80) . .	1 Sun. .	21 55 0	16 Mar. (75) .	3 Tues. .	20·6333	3735
22 Mar. (81) . .	3 Tues. .	4 7 30	6 Mar. (65) .	1 Sun. .	234·9486	3736
22 Mar. (81) . .	4 Wed. .	10 20 0	23 Feb. (54) .	5 Thur. .	110·6320	3737
21 Mar. (81) . .	5 Thur. .	16 32 30	13 Mar. (73) .	4 Wed. .	145·2716	3738
21 Mar. (80) . .	6 Fri. .	22 45 0	2 Mar. (61) .	1 Sun. .	20·9550	3739
22 Mar. (81) . .	1 Sun. .	4 57 30	21 Mar. (80) .	0 Sat. .	55·5946	3740
22 Mar. (81) . .	2 Mon. .	11 10 0	11 Mar. (70) .	5 Thur. .	269·9099	3741
21 Mar. (81) . .	3 Tues. .	17 22 30	28 Feb. (59) .	2 Mon. .	145·5933	3742
21 Mar. (80) . .	4 Wed. .	23 35 0	18 Mar. (77) .	1 Sun .	180·2329	3743
22 Mar. (81) . .	6 Fri. .	5 47 30	7 Mar. (66) .	5 Thur. .	55·9163	3744
22 Mar. (81) . .	0 Sat. .	12 0 0	25 Feb. (56) .	3 Tues. .	270·2316	3745

TABLE

CONCURRENT YEAR.								
Kali	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAMVATSARA. Southern system.	JOVIAN SAMVATSARA. Northern system.	Mean Intercalated (adhika) lunar month.
1	2	3	3a	4	5	6	7	8a
3746	567	702	51		*644-45	35 Plava . . .		...
3747	568	703	52		645-46	36 Śubhakṛit . .		...
3748	569	704	53		646-47	37 Śōbhana . . .		2 Vaiśākha .
3749	570	705	54		647-48	38 Krōdhin . . .		...
3750	571	706	55		*648-49	39 Viśvāvasu . .		10 Pausha .
3751	572	707	56		649-50	40 Parābhava† . .		...
3752	573	708	57		650-51	42 *Kīlaka* . . .		...
3753	574	709	58		651-52	43 *Saumya* . . .		7 Āśvina .
3754	575	710	59		*652-53	44 *Sādhāraṇa* . .		...
3755	576	711	60		653-54	45 *Virōdhakṛit* . .		...
3756	577	712	61		654-55	46 Paridhāvin . .		3 Jyēshṭha .
3757	578	713	62		655-56	47 Pramādin . .		...
3758	579	714	63		*656-57	48 Ānanda . . .		12 Phālguna .
3759	580	715	64		657-58	49 Rākshasa . . .		...
3760	581	716	65		658-59	50 Anala . . .		...
3761	582	717	66		659-60	51 Piṅgala . . .		8 Kārttika .
3762	583	718	67		*660-61	52 Kālayukta . .		...
3763	584	719	68		661-62	53 Siddhārthin . .		...
3764	585	720	69		662-63	54 Raudra . . .		5 Śrāvaṇa .
3765	586	721	70		663-64	55 Durmati . . .		...
3766	587	722	71		*664-65	56 Dundubhi . .		...
3767	588	723	72		665-66	57 Rudhirōdgārin . .		1 Chaitra .
3768	589	724	73		666-67	58 Raktāksha . .		...
3769	590	725	74		667-68	59 Krōdhana . .		10 Pausha .
3770	591	726	75		*668-69	60 Kshaya . . .		...

† By the mean system 41 Plavaṅga was expunged, as also by the true system.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENÇEMENT OF THE								
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here—*t*, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
21 Mar. (81) . .	1 Sun. .	18	12	30	15 Mar. (75) .	2 Mon. .	304·8711	3746
22 Mar. (81) . .	3 Tues. .	0	25	0	4 Mar. (63) .	6 Fri. .	180·5545	3747
22 Mar. (81) . .	4 Wed. .	6	37	30	21 Feb. (52) .	3 Tues. .	56·2378	3748
22 Mar. (81) . .	5 Thur. .	12	50	0	12 Mar. (71) .	2 Mon. .	90·8775	3749
21 Mar. (81) . .	6 Fri. .	19	2	30	1 Mar. (61) .	0 Sat. .	305·1927	3750
22 Mar. (81) . .	1 Sun. .	1	15	0	19 Mar. (78) .	5 Thur. .	1·2005	3751
22 Mar. (81) . .	2 Mon. .	7	27	30	9 Mar. (68) .	3 Tues. .	215·5157	3752
22 Mar. (81) . .	3 Tues. .	13	40	0	26 Feb. (57) .	0 Sat. .	91·1991	3753
21 Mar. (81) . .	4 Wed. .	19	52	30	16 Mar. (76) .	6 Fri. .	125·8387	3754
22 Mar. (81) . .	6 Fri. .	2	5	0	5 Mar. (64) .	3 Tues. .	1·5221	3755
22 Mar. (81) . .	0 Sat. .	8	17	30	23 Feb. (54) .	1 Sun. .	215·8374	3756
22 Mar. (81) . .	1 Sun. .	14	30	0	14 Mar. (73) .	0 Sat. .	250·4770	3757
21 Mar. (81) . .	2 Mon. .	20	42	30	2 Mar. (62) .	4 Wed. .	126·1604	3758
22 Mar. (81) . .	4 Wed. .	2	55	0	21 Mar. (80) .	3 Tues. .	160·8000	3759
22 Mar. (81) . .	5 Thur. .	9	7	30	10 Mar. (69) .	0 Sat.	36·4834	3760
22 Mar. (81) . .	6 Fri. .	15	20	0	28 Feb. (59) .	5 Thur. .	250·7987	3761
21 Mar. (81) . .	0 Sat. .	21	32	30	18 Mar. (78) .	4 Wed. .	285·4383	3762
22 Mar. (81) . .	2 Mon. .	3	45	0	7 Mar. (66) .	1 Sun. .	161·1217	3763
22 Mar. (81) . .	3 Tues. .	9	57	30	24 Feb. (55) .	5 Thur. .	36·8051	3764
22 Mar. (81) . .	4 Wed. .	16	10	0	15 Mar. (74) .	4 Wed. .	71·4447	3765
21 Mar. (81) . .	5 Thur. .	22	22	30	4 Mar. (64) .	2 Mon. .	285·7599	3766
22 Mar. (81) . .	0 Sat. .	4	35	0	21 Feb. (52) .	6 Fri. .	151·4433	3767
22 Mar. (81) . .	1 Sun. .	10	47	30	12 Mar. (71) .	5 Thur. .	196·0830	3768
22 Mar. (81) . .	2 Mon. .	17	0	0	1 Mar. (60) .	2 Mon. .	71·7663	3769
21 Mar. (81) . .	3 Tues. .	23	12	30	18 Mar. (78) .	1 Sun. .	106·4060	3770

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3771	592	727	76		669-70	1 Prabhava		...
3772	593	728	77		670-71	2 Vibhava		6 Bhādrapada
3773	594	729	78		671-72	3 Śukla		...
3774	595	730	79		*672-73	4 Pramōda		...
3775	596	731	80		673-74	5 Prajāpati		3 Jyēshṭha
3776	597	732	81		674-75	6 Aṅgiras		...
3777	598	733	82		675-76	7 Śrīmukha		11 Māgha
3778	599	734	83		*676-77	8 Bhāva		...
3779	600	735	84		677-78	9 Yuvan		...
3780	601	736	85		678-79	10 Dhātṛi		8 Kārttika
3781	602	737	86		679-80	11 Īśvara		...
3782	603	738	87		*680-81	12 Bahudhānya		...
3783	604	739	88		681-82	13 Pramāthin		5 Śrāvaṇa
3784	605	740	89		682-83	14 Vikrama		...
3785	606	741	90		683-84	15 Vṛisha		...
3786	607	742	91		*684-85	16 Chitrabhānu		1 Chaitra
3787	608	743	92		685-86	17 Subhānu		...
3788	609	744	93		686-87	18 Tāraṇa		10 Pausha
3789	610	745	94		687-88	19 Pārthiva		...
3790	611	746	95		*688-89	20 Vyaya		...
3791	612	747	96		689-90	21 Sarvajit		6 Bhādrapada
3792	613	748	97		690-91	22 Sarvadhārin		...
3793	614	749	98		691-92	23 Virōdhin		...
3794	615	750	99		*692-93	24 Vikṛita		3 Jyēshṭha
3795	616	751	100		693-94	25 Khara		...

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).	
13	14	17	19	20	23	1
		H. M. S.				
22 Mar. (81) .	5 Thur.	5 25 0	9 Mar. (68) .	6 Fri.	320·7213	3771
22 Mar. (81) .	6 Fri.	11 37 30	26 Feb. (57) .	3 Tues.	196·4046	3772
22 Mar. (81) .	0 Sat.	17 50 0	17 Mar. (76) .	2 Mon.	231·0442	3773
22 Mar. (82) .	2 Mon.	0 2 30	5 Mar. (65) .	6 Fri.	106·7276	3774
22 Mar. (81) .	3 Tues.	6 15 0	23 Feb. (54) .	4 Wed.	321·0429	3775
22 Mar. (81) .	4 Wed.	12 27 30	13 Mar. (72) .	2 Mon.	17·0506	3776
22 Mar. (81) .	5 Thur.	18 40 0	3 Mar. (62) .	0 Sat.	231·3658	3777
22 Mar. (82) .	0 Sat.	0 52 30	21 Mar. (81) .	6 Fri.	266·0054	3778
22 Mar. (81) .	1 Sun.	7 5 0	10 Mar. (69) .	3 Tues.	141·6888	3779
22 Mar. (81) .	2 Mon.	13 17 30	27 Feb. (58) .	0 Sat.	17·3723	3780
22 Mar. (81) .	3 Tues.	19 30 0	18 Mar. (77) .	6 Fri.	52·0118	3781
22 Mar. (82) .	5 Thur.	1 42 30	7 Mar. (67) .	4 Wed.	266·3271	3782
22 Mar. (81) .	6 Fri.	7 55 0	24 Feb. (55) .	1 Sun.	142·0105	3783
22 Mar. (81) .	0 Sat.	14 7 30	15 Mar. (74) .	0 Sat.	176·6501	3784
22 Mar. (81) .	1 Sun.	20 20 0	4 Mar. (63) .	4 Wed.	52·3331	3785
22 Mar. (82) .	3 Tues.	2 32 30	22 Feb. (53) .	2 Mon.	266·6187	3786
22 Mar. (81) .	4 Wed.	8 45 0	12 Mar. (71) .	1 Sun.	301·2884	3787
22 Mar (81) .	5 Thur.	14 57 30	1 Mar. (60) .	5 Thur.	176·9717	3788
22 Mar. (81) .	6 Fri.	21 10 0	20 Mar. (79) .	4 Wed.	211·6114	3789
22 Mar. (82) .	1 Sun.	3 22 30	8 Mar. (68) .	1 Sun.	87·2948	3790
22 Mar. (81)	2 Mon.	9 35 0	26 Feb. (57) .	6 Fri.	301·6100	3791
22 Mar. (81) .	3 Tues.	15 47 30	16 Mar. (75) .	4 Wed.	9997·6177†	3792
22 Mar. (81) .	4 Wed.	22 0 0	6 Mar. (65) .	2 Mon.	211·9330	3793
22 Mar. (82) .	6 Fri.	4 12 30	23 Feb. (54) .	6 Fri.	87·6164	3794
22 Mar. (81) .	0 Sat.	10 25 0	13 Mar. (72) .	5 Thur.	122·2560	3795

† As a mean tithi Chaitra Sukla 1 was expunged. The civil day corresponding to it, *i.e.*, the first day of the mean luni-solar year, was as given in cols. 19, 20.

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian samvatsara. Southern system.	Jovian samvatsara. Northern system.	Mean Intercalated (adhika) lunar month.
1	2	3	3a	4	5	6	7	8a
3796	617	752	101		694-95	26 Nandana . . .		11 Māgha .
3797	618	753	102		695-96	27 Vijaya . . .		...
3798	619	754	103		*696-97	28 Jaya . . .		...
3799	620	755	104		697-98	29 Manmatha . .		8 Kārttika .
3800	621	756	105		698-99	30 Durmukha . .		...
3801	622	757	106		699-700	31 Hēmalamba . .		...
3802	623	758	107		*700-01	32 Vilamba . . .		4 Āshāḍha .
3803	624	759	108		701-02	33 Vikārin . . .		...
3804	625	760	109		702-03	34 Śārvarin . . .		...
3805	626	761	110		703-04	35 Plava . . .		1 Chaitra .
3806	627	762	111		*704-05	36 Subhakṛit . .		...
3807	628	763	112		705-06	37 Śōbhana . . .		9 Mārgaśira .
3808	629	764	113		706-07	38 Krōdhin . . .		...
3809	630	765	114		707-08	39 Viśvāvasu . .		...
3810	631	766	115		*708-09	40 Parābhava . .		6 Bhādrapada
3811	632	767	116		709-10	41 Plavaṅga . . .		...
3812	633	768	117		710-11	42 Kīlaka . . .		...
3813	634	769	118		711-12	43 Saumya . . .		2 Vaisākha .
3814	635	770	119		*712-13	44 Sādhāraṇa . .		...
3815	636	771	120		713-14	45 Virōdhakṛit . .		11 Māgha .
3816	637	772	121		714-15	46 Paridhāvin . .		...
3817	638	773	122		715-16	47 Pramādin . .		...
3818	639	774	123		*716-17	48 Ānanda . . .		8 Kārttika† .
3819	640	775	124		717-18	49 Rākshasa . . .		...
3820	641	776	125		718-19	50 Anala . . .		...

† By the "Indian Calendar" 7 Āśvina was intercalated but the case was a close one.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							Kali year.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
22 Mar. (81) . .	1 Sun. .	16	37	30	2 Mar. (61) .	2 Mon. .	9997·9394†	3796
22 Mar. (81) . .	2 Mon. .	22	50	0	21 Mar. (80) .	1 Sun. .	32·5790	3797
22 Mar. (82) . .	4 Wed. .	5	2	30	10 Mar. (70) .	6 Fri. .	246·8943	3798
22 Mar. (81) . .	5 Thur. .	11	15	0	27 Feb. (58) .	3 Tues. .	122·5777	3799
22 Mar. (81) . .	6 Fri. .	17	27	30	18 Mar. (77) .	2 Mon. .	157·2173	3800
22 Mar. (81) . .	0 Sat. .	23	40	0	7 Mar. (66) .	6 Fri. .	32·9006	3801
22 Mar. (82) . .	2 Mon. .	5	52	30	25 Feb. (56) .	4 Wed. .	247·2159	3802
22 Mar. (81) . .	3 Tues. .	12	5	0	15 Mar. (74) .	3 Tues. .	281·8555	3803
22 Mar. (81) . .	4 Wed. .	18	37	30	4 Mar. (63) .	0 Sat. .	157·5389	3804
23 Mar. (82) . .	6 Fri. .	0	30	0	21 Feb. (52) .	4 Wed. .	33·2223	3805
22 Mar. (82) . .	0 Sat. .	6	42	30	11 Mar. (71) .	3 Tues. .	67·8619	3806
22 Mar. (81) . .	1 Sun. .	12	55	0	1 Mar. (60) .	1 Sun. .	282·1771	3807
22 Mar. (81) . .	2 Mon. .	19	7	30	20 Mar. (79) .	0 Sat. .	316·8168	3808
23 Mar. (82) . .	4 Wed. .	1	20	0	9 Mar. (68) .	4 Wed. .	192·5002	3809
22 Mar. (82) . .	5 Thur. .	7	32	30	26 Feb. (57) .	1 Sun. .	68·1835	3810
22 Mar. (81) . .	6 Fri. .	13	45	0	16 Mar. (75) .	0 Sat. .	102·8231	3811
22 Mar. (81) . .	0 Sat. .	19	57	30	6 Mar. (65)‡ .	5 Thur. .	317·1384	3812
23 Mar. (82) . .	2 Mon. .	2	10	0	23 Feb. (54) .	2 Mon. .	192·8218	3813
22 Mar. (82) . .	3 Tues. .	8	22	30	13 Mar. (73) .	1 Sun. .	227·4614	3814
22 Mar. (81) . .	4 Wed. .	14	35	0	2 Mar. (61) .	5 Thur. .	103·1447	3815
22 Mar. (81) . .	5 Thur. .	20	47	30	21 Mar. (80) .	4 Wed. .	137·7843	3816
23 Mar. (82) . .	0 Sat. .	3	0	0	10 Mar. (69) .	1 Sun. .	13·4678	3817
22 Mar. (82) . .	1 Sun. .	9	12	30	28 Feb. (59) .	6 Fri. .	227·7831	3818
22 Mar. (81) . .	2 Mon. .	15	25	0	18 Mar. (77) .	5 Thur. .	262·4226	3819
22 Mar. (81) . .	3 Tues. .	21	37	30	7 Mar. (66) .	2 Mon. .	138·1060	3820

As a mean tithi Chaitra Śukla 1 was suppressed. The civil day corresponding to it, *i.e.*, the first day of the mean luni-solar year, was as given in cols. 19, 20.

TABLE

CONCURRENT YEAR.						JOVIAN SAṀVATSARA.		Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Meshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	8	8a
3821	642	777	126		719-20	51 Piṅgala . . .		4 Āshāḍha .
3822	643	778	127		*720-21	52 Kālayukta . .		...
3823	644	779	128		721-22	53 Siddhārthin . .		...
3824	645	780	129		722-23	54 Raudra . . .		1 Chaitra .
3825	646	781	130		723-24	55 Durmati . . .		...
3826	647	782	131		*724-25	56 Dundubhi . .		9 Mārgaśira .
3827	648	783	132		725-26	57 Rudhirōdgārin . .		...
3828	649	784	133		726-27	58 Raktāksha . .		...
3829	650	785	134		727-28	59 Krōdhana . .		6 Bhādrapada
3830	651	786	135		*728-29	60 Kshaya . . .		...
3831	652	787	136		729-30	1 Prabhava . . .		...
3832	653	788	137		730-31	2 Vibhava . . .		2 Vaiśākha .
3833	654	789	138		731-32	3 Śukla . . .		...
3834	655	790	139		*732-33	4 Pramōda . . .		11 Māgha .
3835	656	791	140		733-34	5 Prajāpati . . .		...
3836	657	792	141		734-35	6 Aṅgiras† . . .		...
3837	658	793	142		735-36	8 *Bhāva* . . .		7 Āśvina .
3838	659	794	143		*736-37	9 *Yuvan* . . .		...
3839	660	795	144		737-38	10 *Dhātṛi* . . .		...
3840	661	796	145		738-39	11 *Īśvara* . . .		4 Āshāḍha .
3841	662	797	146		739-40	12 Bahudhānya . .		...
3842	663	798	147		*740-41	13 Pramāthin . .		12 Phālguna .
3843	664	799	148		741-42	14 Vikrama . .		...
3844	665	800	149		742-43	15 Vrisha . . .		...
3845	666	801	150		743-44	16 Chitrabhānu . .		9 Mārgaśira .

† By the mean system, as well as by the true system, 7 Śrīmukha was expunged.

LXXVI—*Contd.*

1 Arya Siddhānta, mean system.

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here *t*, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
23 Mar. (82) . .	5 Thur. .	3	50	0	24 Feb. (55) .	6 Fri. .	13·7894	3821
22 Mar. (82) . .	6 Fri. .	10	2	30	14 Mar. (74) .	5 Thur. .	48·4290	3822
22 Mar. (81) . .	0 Sat. .	16	15	0	4 Mar. (63) .	3 Tues. .	262·7443	3823
22 Mar. (81) . .	1 Sun. .	22	27	30	21 Feb. (52) .	0 Sat. .	138·4276	3824
23 Mar. (82) . .	3 Tues. .	4	40	0	12 Mar. (71) .	6 Fri. .	173·0673	3825
22 Mar. (82) . .	4 Wed. .	10	52	30	29 Feb. (60) .	3 Tues. .	48·7506	3826
22 Mar. (81) . .	5 Thur. .	17	5	0	19 Mar. (78) .	2 Mon. .	83·3903	3827
22 Mar. (81) . .	6 Fri. .	23	17	30	9 Mar. (68) .	0 Sat. .	297·7055	3828
23 Mar. (82) . .	1 Sun. .	5	30	0	26 Feb. (57) .	4 Wed. .	173·3890	3829
22 Mar. (82) . .	2 Mon. .	11	42	30	16 Mar. (76) .	3 Tues. .	208·0286	3830
22 Mar. (81) . .	3 Tues. .	17	55	0	5 Mar. (64) .	0 Sat. .	83·7119	3831
23 Mar. (82) . .	5 Thur. .	0	7	30	23 Feb. (54) .	5 Thur. .	298·0272	3832
23 Mar. (82) . .	6 Fri. .	6	20	0	14 Mar. (73) .	4 Wed. .	332·6669	3833
22 Mar. (82) . .	0 Sat. .	12	32	30	2 Mar. (62) .	1 Sun. .	208·3502	3834
22 Mar. (81) . .	1 Sun. .	18	45	0	21 Mar. (80) .	0 Sat. .	242·9898	3835
23 Mar. (82) . .	3 Tues. .	0	57	30	10 Mar. (69) .	4 Wed. .	118·6732	3836
23 Mar. (82) . .	4 Wed. .	7	10	0	28 Feb. (59) .	2 Mon. .	332·9885	3837
22 Mar. (82) . .	5 Thur. .	13	22	30	17 Mar. (77) .	0 Sat. .	28·9962	3838
22 Mar. (81) . .	6 Fri. .	19	35	0	7 Mar. (66) .	5 Thur. .	243·3115	3839
23 Mar. (82) . .	1 Sun. .	1	47	30	24 Feb. (55) .	2 Mon. .	118·9949	3840
23 Mar. (82) . .	2 Mon. .	8	0	0	15 Mar. (74) .	1 Sun. .	153·6345	3841
22 Mar. (82) . .	3 Tues. .	14	12	30	3 Mar. (63) .	5 Thur. .	29·3179	3842
22 Mar. (81) . .	4 Wed. .	20	25	0	22 Mar. (81) .	4 Wed. .	63·9575	3843
23 Mar. (82) . .	6 Fri. .	2	37	30	12 Mar. (71) .	2 Mon. .	278·2728	3844
23 Mar. (82) . .	0 Sat. .	8	50	0	1 Mar. (60) .	6 Fri. .	163·9561	3845

TABLE

CONCURRENT YEAR.								
Kali.	Saka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAMVATSARA. Southern system.	Northern system.	Mean Intercalated (adhika) lunar month.
1	2	3	3a	4	5	6	7	8a
3846	667	802	151		*744-45	17 Subhânu . . .		...
3847	668	803	152		745-46	18 Târaṇa . . .		...
3848	669	804	153		746-47	19 Pârthiva . . .		5 Śrâvaṇa .
3849	670	805	154		747-48	20 Vyaya . . .		...
3850	671	806	155		*748-49	21 Sarvajit . . .		...
3851	672	807	156		749-50	22 Sarvadhârin . .		2 Vaiśâkha .
3852	673	808	157		750-51	23 Virôdhin . . .		...
3853	674	809	158		751-52	24 Vikṛita . . .		10 Pausha .
3854	675	810	159		*752-53	25 Khara . . .		...
3855	676	811	160		753-54	26 Nandana . . .		...
3856	677	812	161		754-55	27 Vijaya . . .		7 Âśvina .
3857	678	813	162		755-56	28 Jaya . . .		...
3858	679	814	163		*756-57	29 Manmatha . .		...
3859	680	815	164		757-58	30 Durmukha . .		4 Âshâḍha .
3860	681	816	165		758-59	31 Hêmalamba . .		...
3861	682	817	166		759-60	32 Vilamba . . .		12 Phâlguna .
3862	683	818	167		*760-61	33 Vikârin . . .		...
3863	684	819	168		761-62	34 Śârvarin . . .		...
3864	685	820	169		762-63	35 Plava . . .		9 Mârgaśira .
3865	686	821	170		763-64	36 Śubhakrit . .		...
3866	687	822	171		*764-65	37 Śôbhana . . .		...
3867	688	823	172		765-66	38 Krôdhin . . .		5 Śrâvaṇa .
3868	689	824	173		766-67	39 Viśvâvasu. . .		...
3869	690	825	174		767-68	40 Parâbhava . .		...
3870	691	826	175		*768-69	41 Plavaṅga . . .		2 Vaiśâkha .

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							Kali year.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).		
13	14	17	19	20	23		1
		H. M. S.					
22 Mar. (82)	1 Sun.	15 2 30	19 Mar. (79)	5 Thur.	188·5957		3846
22 Mar. (81)	2 Mon.	21 15 0	8 Mar. (67)	2 Mon.	64·2790		3847
23 Mar. (82)	4 Wed.	3 27 30	26 Feb. (57)	0 Sat.	278·5944		3848
23 Mar. (82)	5 Thur.	9 40 0	17 Mar. (76)	6 Fri.	313·2341		3849
22 Mar. (82)	6 Fri.	15 52 30	5 Mar. (65)	3 Tues.	188·9173		3850
22 Mar. (81)	0 Sat.	22 5 0	22 Feb. (53)	0 Sat.	64·6007		3851
23 Mar. (82)	2 Mon.	4 17 30	13 Mar. (72)	6 Fri.	99·2404		3852
23 Mar. (82)	3 Tues.	10 30 0	3 Mar. (62)	4 Wed.	313·5556		3853
22 Mar. (82)	4 Wed.	16 42 30	20 Mar. (80)	2 Mon.	9·5633		3854
22 Mar. (81)	5 Thur.	22 55 0	10 Mar. (69)	0 Sat.	223·8786		3855
23 Mar. (82)	0 Sat.	5 7 30	27 Feb. (58)	4 Wed.	99·5620		3856
23 Mar. (82)	1 Sun.	11 20 0	18 Mar. (77)	3 Tues.	134·2016		3857
22 Mar. (82)	2 Mon.	17 32 30	6 Mar. (66)	0 Sat.	9·8850		3858
22 Mar. (81)	3 Tues.	23 45 0	24 Feb. (55)	5 Thur.	224·2003		3859
23 Mar. (82)	5 Thur.	5 57 30	15 Mar. (74)	4 Wed.	258·8390		3860
23 Mar. (82)	6 Fri.	12 10 0	4 Mar. (63)	1 Sun.	134·5233		3861
22 Mar. (82)	0 Sat.	18 22 30	22 Mar. (82)	0 Sat.	169·1628		3862
23 Mar. (82)	2 Mon.	0 35 0	11 Mar. (70)	4 Wed.	44·8463		3863
23 Mar. (82)	3 Tues.	6 47 30	1 Mar. (60)	2 Mon.	259·1616		3864
23 Mar. (82)	4 Wed.	13 0 0	20 Mar. (79)	1 Sun.	293·8012		3865
22 Mar. (82)	5 Thur.	19 12 30	8 Mar. (68)	5 Thur.	169·4846		3866
23 Mar. (82)	0 Sat.	1 25 0	25 Feb. (56)	2 Mon.	45·1680		3867
23 Mar (82)	1 Sun.	7 37 30	16 Mar. (75)	1 Sun	79·8076		3868
23 Mar. (82)	2 Mon.	13 50 0	6 Mar. (65)	6 Fri	294·1228		3869
22 Mar. (82)	3 Tues.	20 2 30	23 Feb. (54)	3 Tues.	169·8062		3870

TABLE

CONCURRENT YEAR.						JOVIAN SAMVATSARA.		Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3871	692	827	176		769-70	42 Kīlaka . . .		...
3872	693	828	177		770-71	43 Saumya . . .		10 Pausha .
3873	694	829	178		771-72	44 Sādhāraṇa . .		...
3874	695	830	179		*772-73	45 Virōdhakṛit . .		...
3875	696	831	180		773-74	46 Paridhāvin . .		7 Āśvina .
3876	697	832	181		774-75	47 Pramādin . .		...
3877	698	833	182		775-76	48 Ānanda . . .		...
3878	699	834	183		*776-77	49 Rākshasa . . .		3 Jyēshṭha .
3879	700	835	184		777-78	50 Anala . . .		...
3880	701	836	185		778-79	51 Piṅgala . . .		12 Phālguna .
3881	702	837	186		779-80	52 Kālayukta . .		...
3882	703	838	187		*780-81	53 Siddhārthin . .		...
3883	704	839	188		781-82	54 Raudra . . .		8 Kārttika .
3884	705	840	189		782-83	55 Durmati . . .		...
3885	706	841	190		783-84	56 Dundubhi . .		...
3886	707	842	191		*784-85	57 Rudhirōdgārin . .		5 Śrāvaṇa .
3887	708	843	192		785-86	58 Raktāksha . .		...
3888	709	844	193		786-87	59 Krōdhana .		...
3889	710	845	194		787-88	60 Kshaya . . .		1 Chaitra .
3890	711	846	195		*788-89	1 Prabhava . . .		...
3891	712	847	196		789-90	2 Vibhava . . .		10 Pausha .
3892	713	848	197		790-91	3 Śukla . . .		...
3893	714	849	198		791-92	4 Pramōda . . .		...
3894	715	850	199		*792-93	5 Prajāpati . . .		7 Āśvina† .
3895	716	851	200		793-94	6 Aṅgiras . . .		...

† By the "Indian Calendar" 6 Bhādrapada was intercalated.

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Secretariat Library, Lahore.
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University Library, ditto.
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Secretariat Library, Nagpur.
Museum Library, ditto.
Secretariat Library, Rangoon.
Oriental and Mixed Library, Bangalore.
College Library, Dacca.
Itihasa Somsodhak Mandal, Poona.
Museum Library, Lucknow.
The Mythic Society, Bangalore.
Department of Education Library, Delhi.
Government College Library, Kumbakonam.
Pachaiyappa's College Library, Madras.
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Sanskrit College Library, Tiruvadi (Tanjore).
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LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	a (here = t, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
23 Mar. (82) . .	5 Thur. .	2	15	0	13 Mar. (72) .	2 Mon. .	204·4459	3871
23 Mar. (82) . .	6 Fri. .	8	27	30	2 Mar. (61) .	6 Fri. .	80·1292	3872
23 Mar. (82) . .	0 Sat. .	14	40	0	21 Mar. (80) .	5 Thur. .	114·7688	3873
22 Mar. (82) . .	1 Sun. .	20	52	30	10 Mar. (70) .	3 Tues. .	329·0841	3874
23 Mar. (82) . .	3 Tues. .	3	5	0	27 Feb. (58) .	0 Sat. .	204·7675	3875
23 Mar. (82) . .	4 Wed. .	9	17	30	18 Mar. (77) .	6 Fri. .	239·4071	3876
23 Mar. (82) . .	5 Thur. .	15	30	0	7 Mar. (66) .	3 Tues. .	115·0904	3877
22 Mar. (82) . .	6 Fri. .	21	42	30	25 Feb. (56) .	1 Sun. .	329·4057	3878
23 Mar. (82) . .	1 Sun. .	3	55	0	14 Mar. (73) .	6 Fri. .	25·4134	3879
23 Mar. (82) . .	2 Mon. .	10	7	30	4 Mar. (63) .	4 Wed. .	239·7288	3880
23 Mar. (82) . .	3 Tues. .	16	20	0	23 Mar. (82) .	3 Tues. .	274·3682	3881
22 Mar. (82) . .	4 Wed. .	22	32	30	11 Mar. (71) .	0 Sat. .	150·0517	3882
23 Mar. (82) . .	6 Fri. .	4	45	0	28 Feb. (59) .	4 Wed. .	25·7351	3883
23 Mar. (82) . .	0 Sat. .	10	57	30	19 Mar. (78) .	3 Tues. .	60·3747	3884
23 Mar. (82) . .	1 Sun. .	17	10	0	9 Mar. (68) .	1 Sun. .	274·6900	3885
22 Mar. (82) . .	2 Mon. .	23	22	30	26 Feb. (57) .	5 Thur. .	150·3734	3886
23 Mar. (82) . .	4 Wed. .	5	35	0	16 Mar. (75) .	4 Wed. .	185·0130	3887
23 Mar. (82) . .	5 Thur. .	11	47	30	5 Mar. (64) .	1 Sun. .	60·6963	3888
23 Mar. (82) . .	6 Fri. .	18	0	0	23 Feb. (54) .	6 Fri. .	275·0116	3889
23 Mar. (83) . .	1 Sun. .	0	12	30	13 Mar. (73) .	5 Thur. .	309·6513	3890
23 Mar. (82) . .	2 Mon. .	6	25	0	2 Mar. (61) .	2 Mon. .	185·3346	3891
23 Mar. (82) . .	3 Tues. .	12	37	30	21 Mar. (80) .	1 Sun. .	219·9743	3892
23 Mar. (82) . .	4 Wed. .	18	50	0	10 Mar. (69) .	5 Thur. .	95·6576	3893
23 Mar. (83) . .	6 Fri. .	1	2	30	28 Feb. (59) .	3 Tues. .	309·9730	3894
23 Mar. (82) . .	0 Sat. .	7	15	0	17 Mar. (76) .	1 Sun. .	5·9807	3895

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3896	717	852	201		794-95	7 Śrīmukha . . .		...
3897	718	853	202		795-96	8 Bhāva . . .		3 Jyēshṭha .
3898	719	854	203		*796-97	9 Yuvan . . .		...
3899	720	855	204		797-98	10 Dhātṛi . . .		12 Phālguna .
3900	721	856	205		798-99	11 Īśvara . . .		...
3901	722	857	206		799-800	12 Bahudhānya . .		...
3902	723	858	207		*800-01	13 Pramāthin . .		8 Kārttika .
3903	724	859	208		801-02	14 Vikrama . . .		...
3904	725	860	209		802-03	15 Vṛisha . . .		...
3905	726	861	210		803-04	16 Chitrabhānu . .		5 Śrāvaṇa .
3906	727	862	211		*804-05	17 Subhānu . . .		...
3907	728	863	212		805-06	18 Tāraṇa . . .		...
3908	729	864	213		806-07	19 Pārthiva . . .		1 Chaitra .
3909	730	865	214		807-08	20 Vyaya . . .		...
3910	731	866	215		*808-09	21 Sarvajit . . .		10 Pausha .
3911	732	867	216		809-10	22 Sarvadhārin . .		...
3912	733	868	217		810-11	23 Virōdhin . . .		...
3913	734	869	218		811-12	24 Vikṛita . . .		6 Bhādrapada.
3914	735	870	219		*812-13	25 Khara . . .		...
3915	736	871	220		813-14	26 Nandana . . .		...
3916	737	872	221		814-15	27 Vijaya . . .		3 Jyēshṭha .
3917	738	873	222		815-16	28 Jaya . . .		...
3918	739	874	223		*816-17	29 Manmatha . .		11 Māgha .
3919	740	875	224		817-18	30 Durmukha . .		...
3920	741	876	225		818-19	31 Hēmalamba . .		...

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).	
13	14	17	19	20	23	1
		H. M. S.				
23 Mar. (82) . .	1 Sun. .	13 27 30	7 Mar. (66) .	6 Fri. .	220·2959	3896
23 Mar. (82) . .	2 Mon. .	19 40 0	24 Feb. (55) .	3 Tues. .	95·9793	3897
23 Mar. (83) . .	4 Wed. .	1 52 30	14 Mar. (74) .	2 Mon. .	130·6189	3898
23 Mar. (82) . .	5 Thur. .	8 5 0	3 Mar. (62) .	6 Fri. .	6·3023	3899
23 Mar. (82) . .	6 Fri. .	14 17 30	22 Mar. (81) .	5 Thur. .	40·9419	3900
23 Mar. (82) . .	0 Sat. .	20 30 0	12 Mar. (71) .	3 Tues. .	255·2572	3901
23 Mar. (83) . .	2 Mon. .	2 42 30	29 Feb. (60) .	0 Sat. .	130·9406	3902
23 Mar. (82) . .	3 Tues. .	8 55 0	19 Mar. (78) .	6 Fri. .	165·5802	3903
23 Mar. (82) . .	4 Wed. .	15 7 30	8 Mar. (67) .	3 Tues. .	41·2636	3904
23 Mar. (82) . .	5 Thur. .	21 20 0	26 Feb. (57) .	1 Sun. .	255·5789	3905
23 Mar. (83) . .	0 Sat. .	3 32 30	16 Mar. (76) .	0 Sat. .	290·2185	3906
23 Mar. (82) . .	1 Sun. .	9 45 0	5 Mar. (64) .	4 Wed. .	165·9018	3907
23 Mar. (82) . .	2 Mon. .	15 57 30	22 Feb. (53) .	1 Sun. .	41·5852	3908
23 Mar. (82) . .	3 Tues. .	22 10 0	13 Mar. (72) .	0 Sat. .	76·2248	3909
23 Mar. (83) . .	5 Thur. .	4 22 30	2 Mar. (62) .	5 Thur. .	290·5401	3910
23 Mar. (82) .	6 Fri. .	10 35 0	21 Mar. (80) .	4 Wed. .	325·1798	3911
23 Mar. (82) . .	0 Sat. .	16 47 30	10 Mar. (69) .	1 Sun. .	200·8631	3912
23 Mar. (82) . .	1 Sun. .	23 0 0	27 Feb. (58) .	5 Thur. .	76·5465	3913
23 Mar. (83) . .	3 Tues. .	5 12 30	17 Mar. (77) .	4 Wed. .	111·1862	3914
23 Mar. (82) . .	4 Wed. .	11 25 0	7 Mar. (66) .	2 Mon. .	325·5013	3915
23 Mar. (82) . .	5 Thur. .	17 37 30	24 Feb. (55) .	6 Fri. .	201·1847	3916
23 Mar. (82) . .	6 Fri. .	23 50 0	15 Mar. (74) .	5 Thur. .	235·8214	3917
23 Mar. (83) . .	1 Sun. .	6 2 30	3 Mar. (63) .	2 Mon. .	111·5078	3918
23 Mar. (82) . .	2 Mon. .	12 15 0	22 Mar. (81) .	1 Sun. .	146·1473	3919
23 Mar. (82) . .	3 Tues. .	18 27 30	11 Mar. (70) .	5 Thur. .	21·8307	3920

TABLE

CONCURRENT YEAR.								
						Jovian Saṁvatsara.		Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3921	742	877	226		819-20	32 Vilamba† . . .		8 Kârttika .
3922	743	878	227		*820-21	34 *Śârvarin* . . .		...
3923	744	879	228		821-22	35 *Plava* . . .		...
3924	745	880	229		822-23	36 *Śubhakṛit* . . .		4 Âshâḍha .
3925	746	881	230		823-24	37 *Śobhana* . . .		...
3926	747	882	231		*824-25	38 Krōdhin . . .		...
3927	748	883	232	0-1	825-26	39 Viśvâvasu . .		1 Chaitra .
3928	749	884	233	1-2	826-27	40 Parâbhava . .		...
3929	750	885	234	2-3	827-28	41 Plavaṅga . .		10 Pausha
3930	751	886	235	3-4	*828-29	42 Kîlaka . . .		...
3931	752	887	236	4-5	829-30	43 Saumya . . .		...
3932	753	888	237	5-6	830-31	44 Sâdhâraṇa . .		6 Bhâdrapada.
3933	754	889	238	6-7	831-32	45 Virōdhakṛit . .		...
3934	755	890	239	7-8	*832-33	46 Paridhâvin . .		...
3935	756	891	240	8-9	833-34	47 Pramâdin . .		3 Jyēshṭha .
3936	757	892	241	9-10	834-35	48 Ânanda . . .		...
3937	758	893	242	10-11	835-36	49 Râkshasa . . .		11 Mâgha .
3938	759	894	243	11-12	*836-37	50 Anala . . .		...
3939	760	895	244	12-13	837-38	51 Piṅgala . . .		...
3940	761	896	245	13-14	838-39	52 Kâlayukta . .		8 Kârttika .
3941	762	897	246	14-15	839-40	53 Siddhârthin . .		...
3942	763	898	247	15-16	*840-41	54 Raudra . . .		...
3943	764	899	248	16-17	841-42	55 Durmati . . .		4 Âshâḍha .
3944	765	900	249	17-18	842-43	56 Dundubhi . .		...
3945	766	901	250	18-19	843-44	57 Rudhirōdgârin . .		...

† By both mean and true systems 33 Vikârin was expunged.

LXXVI—*Contd.*

1 Ârya Siddhânta, mean system.

COMMENCEMENT OF THE									Kali year.
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).				
Day and Month, A.D.	Week-day.	Time of mean Mêsha-saṁkrânti.			Day and month, A. D.	Week-day.	*a* (here = *t*, the index of the tithi).		
13	14	17			19	20	23		1
		H.	M.	S.					
24 Mar. (83) . .	5 Thur. .	0	40	0	1 Mar. (60) .	3 Tues. .	266·1460		3921
23 Mar. (83) . .	6 Fri. .	6	52	30	19 Mar. (79) .	2 Mon. .	270·7856		3922
23 Mar. (82) . .	0 Sat. .	13	5	0	8 Mar. (67) .	6 Fri. .	146·4690		3923
23 Mar. (82) . .	1 Sun. .	19	17	30	25 Feb. (56) .	3 Tues. .	22·1524		3924
24 Mar. (83) . .	3 Tues. .	1	30	0	16 Mar. (75) .	2 Mon. .	56·7920		3925
23 Mar. (83) . .	4 Wed. .	7	42	30	5 Mar. (65) .	0 Sat. .	271·1073		3926
23 Mar. (82) . .	5 Thur. .	13	55	0	22 Feb. (53) .	4 Wed. .	146·7906		3927
23 Mar. (82) . .	6 Fri. .	20	7	30	13 Mar. (72) .	3 Tues. .	181·4303		3928
24 Mar. (83) . .	1 Sun. .	2	20	0	2 Mar. (61) .	0 Sat. .	57·1137		3929
23 Mar. (83) . .	2 Mon. .	8	32	30	20 Mar. (80) .	6 Fri. .	91·7533		3930
23 Mar (82) . .	3 Tues. .	14	45	0	10 Mar. (69) .	4 Wed. .	306·0686		3931
23 Mar. (82) . .	4 Wed. .	20	57	30	27 Feb. (58) .	1 Sun. .	181·7519		3932
24 Mar. (83) . .	6 Fri. .	3	10	0	18 Mar. (77) .	0 Sat. .	216·3916		3933
23 Mar. (83) . .	0 Sat. .	9	22	30	6 Mar. (66) .	4 Wed. .	92·0749		3934
23 Mar. (82) . .	1 Sun. .	15	35	0	24 Feb. (55) .	2 Mon. .	306·3902		3935
23 Mar. (82) . .	2 Mon. .	21	47	30	14 Mar. (73) .	0 Sat. .	2·3979		3936
24 Mar. (83) . .	4 Wed. .	4	0	0	4 Mar. (63) .	5 Thur. .	216·7132		3937
23 Mar. (83) . .	5 Thur. .	10	12	30	22 Mar. (82) .	4 Wed. .	251·3528		3938
23 Mar. (82) . .	6 Fri. .	16	25	0	11 Mar. (70) .	1 Sun. .	127·0362		3939
23 Mar. (82) . .	0 Sat .	22	37	30	28 Feb. (59) .	5 Thur. .	2·7176		3940
24 Mar. (83) . .	2 Mon .	4	50	0	19 Mar. (78) .	4 Wed. .	37·3592		3941
23 Mar. (83) . .	3 Tues. .	11	2	30	8 Mar. (68) .	2 Mon. .	251·6745		3942
23 Mar. (82) . .	4 Wed. .	17	15	0	25 Feb. (56) .	6 Fri. .	127·3579		3943
23 Mar. (82) . .	5 Thur. .	23	17	30	16 Mar. (75) .	5 Thur. .	161·9975		3944
24 Mar. (83) . .	0 Sat. .	5	40	0	5 Mar. (64) .	2 Mon. .	37·6809		3945

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA.		Mean Intercalated (adhika) lunar month.
						Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3946	767	902	251	19-20	*844-45	58 Raktāksha		1 Chaitra
3947	768	903	252	20-21	845-46	59 Krōdhana		...
3948	769	904	253	21-22	846-47	60 Kshaya		9 Mārgaśira
3949	770	905	254	22-23	847-48	1 Prabhava		...
3950	771	906	255	23-24	*848-49	2 Vibhava		...
3951	772	907	256	24-25	849-50	3 Śukla		6 Bhādrapada
3952	773	908	257	25-26	850-51	4 Pramōda		...
3953	774	909	258	26-27	851-52	5 Prajāpati		...
3954	775	910	259	27-28	*852-53	6 Aṅgiras		2 Vaiśākha
3955	776	911	260	28-29	853-54	7 Śrīmukha		...
3956	777	912	261	29-30	854-55	8 Bhāva		11 Māgha
3957	778	913	262	30-31	855-56	9 Yuvan		...
3958	779	914	263	31-32	*856-57	10 Dhātṛi		...
3959	780	915	264	32-33	857-58	11 Īśvara		7 Āśvin
3960	781	916	265	33-34	858-59	12 Bahudhānya		...
3961	782	917	266	34-35	859-60	13 Pramāthin		...
3962	783	918	267	35-36	*860-61	14 Vikrama		4 Āshāḍha
3963	784	919	268	36-37	861-62	15 Vṛisha		...
3964	785	920	269	37-38	862-63	16 Chitrabhānu		12 Phālguna
3965	786	921	270	38-39	863-64	17 Subhānu		...
3966	787	922	271	39-40	*864-65	18 Tāraṇa		...
3967	788	923	272	40-41	865-66	19 Pārthiva		9 Mārgaśira
3968	789	924	273	41-42	866-67	20 Vyaya		...
3969	790	925	274	42-43	867-68	21 Sarvajit		...
3970	791	926	275	43-44	*868-69	22 Sarvadhārin		6 Bhādrapada.†

† By the "Indian Calendar" 5 Śrāvaṇa was intercalated.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
23 Mar. (83)	1 Sun.	11	52	30	23 Feb. (54)	0 Sat.	251·9960	3946
23 Mar. (82)	2 Mon.	18	5	0	13 Mar. (72)	6 Fri.	286·6357	3947
24 Mar. (83)	4 Wed.	0	17	30	2 Mar. (61)	3 Tues.	162·3191	3948
24 Mar. (83)	5 Thur.	6	30	0	21 Mar. (80)	2 Mon.	196·0588	3949
23 Mar. (83)	6 Fri.	12	42	30	9 Mar. (69)	6 Fri.	72·6421	3950
23 Mar. (82)	0 Sat.	18	55	0	27 Feb. (58)	4 Wed.	286·9573	3951
24 Mar. (83)	2 Mon.	1	7	30	18 Mar. (77)	3 Tues.	321·5970	3952
24 Mar. (83)	3 Tues.	7	20	0	7 Mar. (66)	0 Sat.	197·2803	3953
23 Mar. (83)	4 Wed.	13	32	30	24 Feb. (55)	4 Wed.	72·9637	3954
23 Mar. (82)	5 Thur.	19	45	0	14 Mar. (73)	3 Tues.	107·6033	3955
24 Mar. (83)	0 Sat.	1	57	30	4 Mar. (63)	1 Sun.	321·0186	3956
24 Mar. (83)	1 Sun.	8	10	0	22 Mar. (81)	6 Fri.	17·9263	3957
23 Mar. (83)	2 Mon.	14	22	30	11 Mar. (71)	4 Wed.	232·2416	3958
23 Mar. (82)	3 Tues.	20	25	0	28 Feb. (59)	1 Sun.	107·9250	3959
24 Mar. (83)	5 Thur.	2	47	30	10 Mar. (78)	0 Sat.	142·5646	3960
24 Mar. (83)	6 Fri.	9	0	0	8 Mar. (67)	4 Wed.	18·2480	3961
23 Mar. (83)	0 Sat.	15	12	30	26 Feb. (57)	2 Mon.	232·5633	3962
23 Mar. (82)	1 Sun.	21	25	0	16 Mar. (75)	1 Sun.	267·2029	3963
24 Mar. (83)	3 Tues.	3	37	30	5 Mar. (64)	5 Thur.	142·8863	3964
24 Mar. (83)	4 Wed.	9	50	0	24 Mar. (83)	4 Wed.	177·5259	3965
23 Mar. (83)	5 Thur.	16	2	30	12 Mar. (72)	1 Sun.	53·2093	3966
23 Mar. (82)	6 Fri.	22	15	0	2 Mar. (61)	6 Fri.	267·5245	3967
24 Mar. (83)	1 Sun.	4	27	30	21 Mar. (80)	5 Thur.	302·1642	3968
24 Mar. (83)	2 Mon.	10	40	0	10 Mar. (69)	2 Mon.	177·8476	3969
23 Mar. (83)	3 Tues.	16	52	30	27 Feb. (58)	6 Fri.	53·5309	3970

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	
1	2	3	3a	4	5	6	7	8a
3971	792	927	276	44-45	869-70	23 Virōdhin		...
3972	793	928	277	45-46	870-71	24 Vikṛita		...
3973	794	929	278	46-47	871-72	25 Khara		2 Vaiśākha
3974	795	930	279	47-48	*872-73	26 Nandana		...
3975	796	931	280	48-49	873-74	27 Vijaya		11 Māgha
3976	797	932	281	49-50	874-75	28 Jaya		...
3977	798	933	282	50-51	875-76	29 Manmatha		...
3978	799	934	283	51-52	*876-77	30 Durmukha		7 Āśvina
3979	800	935	284	52-53	877-78	31 Hēmalamba		...
3980	801	936	285	53-54	878-79	32 Vilamba		...
3981	802	937	286	54-55	879-80	33 Vikārin		4 Āshāḍha
3982	803	938	287	55-56	*880-81	34 Śārvarin		...
3983	804	939	288	56-57	881-82	35 Plava		12 Phālguna
3984	805	940	289	57-58	882-83	36 Śubhakṛit		...
3985	806	941	290	58-59	883-84	37 Śōbhana		...
3986	807	942	291	59-60	*884-85	38 Krōdhin		9 Mārgaśira
3987	808	943	292	60-61	885-86	39 Viśvāvasu		...
3988	809	944	293	61-62	886-87	40 Parābhava		...
3989	810	945	294	62-63	887-88	41 Plavaṅga		5 Śrāvaṇa
3990	811	946	295	63-64	*888-89	42 Kīlaka		...
3991	812	947	296	64-65	889-90	43 Saumya		...
3992	813	948	297	65-66	890-91	44 Sādhāraṇa		2 Vaiśākha
3993	814	949	298	66-67	891-92	45 Virōdhakṛit		...
3994	815	950	299	67-68	*892-93	46 Paridhāvin		10 Pausha
3995	816	951	300	68-69	893-94	47 Pramādin		...

LXXVI—*contd.*

1 Ârya Siddhânta, mean system.

COMMENCEMENT OF THE									Kali year.
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrânti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).		
13	14	17			19	20	23		1
		H.	M.	S.					
23 Mar. (82)	4 Wed.	23	5	0	17 Mar. (76)	5 Thur.	88·1705		3971
24 Mar. (83)	6 Fri.	5	17	30	7 Mar. (66)	3 Tues.	302·4858		3972
24 Mar. (83)	0 Sat.	11	30	0	24 Feb. (55)	0 Sat.	178·1692		3973
23 Mar. (83)	1 Sun.	17	42	30	14 Mar. (74)	6 Fri.	212·8088		3974
23 Mar. (82)	2 Mon.	23	55	0	3 Mar. (62)	3 Tues.	88·4922		3975
24 Mar. (83)	4 Wed.	6	7	30	22 Mar. (81)	2 Mon.	123·1318		3976
24 Mar. (83)	5 Thur.	12	20	0	11 Mar. (70)	6 Fri.	9998·8151†		3977
23 Mar. (83)	6 Fri.	18	32	30	29 Feb. (60)	4 Wed.	213·1304		3978
24 Mar. (83)	1 Sun.	0	45	0	19 Mar. (78)	3 Tues.	247·7700		3979
24 Mar. (83)	2 Mon.	6	57	30	8 Mar. (67)	0 Sat.	123·4535		3980
24 Mar. (83)	3 Tues.	13	10	0	25 Feb. (56)	4 Wed.	9999·1368†		3981
23 Mar. (83)	4 Wed.	19	22	30	15 Mar. (75)	3 Tues.	33·7764		3982
24 Mar. (83)	6 Fri.	1	35	0	5 Mar. (64)	1 Sun.	248·0917		3983
24 Mar. (83)	0 Sat.	7	47	30	24 Mar. (83)	0 Sat.	282·7313		3984
24 Mar. (83)	1 Sun.	14	0	0	13 Mar. (72)	4 Wed.	158·4147		3985
23 Mar. (83)	2 Mon.	20	12	30	1 Mar. (61)	1 Sun.	34·0980		3986
24 Mar. (83)	4 Wed.	2	25	0	20 Mar. (79)	0 Sat.	68·7377		3987
24 Mar. (83)	5 Thur.	8	37	30	10 Mar. (69)	5 Thur.	283·0530		3988
24 Mar. (83)	6 Fri.	14	50	0	27 Feb. (58)	2 Mon.	158·7364		3989
23 Mar. (83)	0 Sat.	21	2	30	17 Mar. (77)	1 Sun.	193·3760		3990
24 Mar. (83)	2 Mon.	3	15	0	6 Mar. (65)	5 Thur.	69·0594		3991
24 Mar. (83)	3 Tues.	9	27	30	24 Feb. (55)	3 Tues.	283·3746		3992
24 Mar. (83)	4 Wed.	15	40	0	15 Mar. (74)	2 Mon.	318·0143		3993
23 Mar. (83)	5 Thur.	21	52	30	3 Mar. (63)	6 Fri.	193·6976		3994
24 Mar. (83)	0 Sat.	4	5	0	22 Mar. (81)	5 Thur.	228·3372		3995

† As a mean tithi Chaitra śukla 1 was suppressed. The civil day corresponding to it, *i.e.*, the first day of the mean luni-solar year, was as given in cols. 19, 20.

TABLE

CONCURRENT YEAR.								
						Jovian saṁvatsara.		Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3996	817	952	301	69-70	894-95	48 Ānanda . . .		...
3997	818	953	302	70-71	895-96	49 Rākshasa . . .		7 Āśvina .
3998	819	954	303	71-72	*896-97	50 Anala . . .		...
3999	820	955	304	72-73	897-98	51 Piṅgala . . .		...
4000	821	956	305	73-74	898-99	52 Kālayukta .		3 Jyēshṭha .
4001	822	957	306	74-75	899-900	53 Siddhārthin . .		...
4002	823	958	307	75-76	*900-01	54 Raudra . . .		12 Phālguna .
4003	824	959	308	76-77	901-02	55 Durmati . . .		...
4004	825	960	309	77-78	902-03	56 Dundubhi . .		...
4005	826	961	310	78-79	903-04	57 Rudhirōdgārin . .		9 Mārgaśira § .
4006	827	962	311	79-80	*904-05	58 Raktāksha† . .		...
4007	828	963	312	80-81	905-06	59 Krōdhana .	60 *Kshaya* .	...
4008	829	964	313	81-82	906-07	60 Kshaya‡ .	1 *Prabhava* .	5 Śrāvaṇa .
4009	830	965	314	82-83	907-08	1 Prabhava .	2 *Vibhava* .	...
4010	831	966	315	83-84	*908-09	2 Vibhava .	3 *Śukla* .	...
4011	832	967	316	84-85	909-10	3 Śukla .	4 Pramōda .	2 Vaiśākha .
4012	833	968	317	85-86	910-11	4 Pramōda .	5 Prajāpati .	...
4013	834	969	318	86-87	911-12	5 Prajāpati .	6 Aṅgiras .	10 Pausha .
4014	835	970	319	87-88	*912-13	6 Aṅgiras .	7 Śrīmukha .	...
4015	836	971	320	88-89	913-14	7 Śrīmukha .	8 Bhāva .	...
4016	837	972	321	89-90	914-15	8 Bhāva .	9 Yuvan .	7 Āśvina .
4017	838	973	322	90-91	915-16	9 Yuvan . .	10 Dhātṛi . .	...
4018	839	974	323	91-92	*916-17	10 Dhātṛi . .	11 Īśvara . .	...
4019	840	975	324	92-93	917-18	11 Īśvara . .	12 Bahudhānya .	3 Jyēshṭha .
4020	841	976	325	93-94	918-19	12 Bahudhānya .	13 Pramāthin .	...

† By the mean system 59 Krōdhana was expunged; by the true system 60 Kshaya was the expunged saṁvatsara and the year A.D. 905-6 was called "Krodhana."
‡ By southern reckoning there was no suppression after this year
§ By the "*Indian Calendar*" 8 Kārttika was intercalated.

LXXVI—*contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							Kali year.
Mean solar year.			Mean luni-solar year (mean sunrise of civil day on which Chaitra Śukla 1 ends).				
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.		Day and month, A. D.	Week-day.	a (here = t, the index of the tithi).	
13	14	17		19	20	22	1
		H. M. S.					
24 Mar. (83) . .	1 Sun. .	10 17 30		11 Mar. (70) .	2 Mon. .	104·0206	3996
24 Mar. (83) . .	2 Mon. .	16 30 0		1 Mar. (60) .	0 Sat. .	318·3359	3997
23 Mar. (83) . .	3 Tues. .	22 42 30		18 Mar. (78) .	5 Thur. .	14·3436	3998
24 Mar. (83) . .	5 Thur. .	4 55 0		8 Mar. (67) .	3 Tues. .	228·6589	3999
24 Mar. (83) . .	6 Fri. .	11 7 30		25 Feb. (56) .	0 Sat. .	104·3423	4000
24 Mar. (83) . .	0 Sat. .	17 20 0		16 Mar. (75) .	6 Fri. .	138·9819	4001
23 Mar. (83) . .	1 Sun. .	23 32 30		4 Mar. (64) .	3 Tues. .	14·6653	4002
24 Mar. (83) . .	3 Tues. .	5 45 0		23 Mar. (82) .	2 Mon. .	49·3049	4003
24 Mar.. (83) . .	4 Wed. .	11 57 30		13 Mar. (72) .	0 Sat. .	263·6202	4004
24 Mar. (83) . .	5 Thur. .	18 10 0		2 Mar. (61) .	4 Wed. .	139·3084	4005
24 Mar. (84) . .	0 Sat. .	0 22 30		20 Mar. (80) .	3 Tues. .	173·9431	4006
24 Mar. (83) . .	1 Sun. .	6 35 0		9 Mar. (68) .	0 Sat. .	49·6264	4007
24 Mar. (83) . .	2 Mon. .	12 47 30		27 Feb. (58) .	5 Thur. .	263·9418	4008
24 Mar. (8[illegible]) . .	3 Tues. .	19 0 0		18 Mar. (77) .	4 Wed. .	298·5814	4009
24 Mar. (8[illegible] . .	5 Thur. .	1 12 30		6 Mar. (66) .	1 Sun. .	174·2647	4010
24 Mar. (83) . .	6 Fri. .	7 25 0		23 Feb. (54) .	5 Thur. .	49·9481	4011
24 Mar. (83) . .	0 Sat. .	13 37 30		14 Mar. (73) .	4 Wed. .	84·5878	4012
24 Mar. (83) . .	1 Sun. .	19 50 0		4 Mar. (63) .	2 Mon. .	298·9030	4013
24 Mar. (84) . .	3 Tues. .	2 2 30		21 Mar. (81) .	0 Sat. .	9994·9109†	4014
24 Mar. (83) . .	4 Wed. .	8 15 0		11 Mar. (70) .	5 Thur. .	209·2259	4015
24 Mar. (83) . .	5 Thur. .	14 27 30		28 Feb. (59) .	2 Mon. .	84·9093	4016
24 Mar. (83) . .	6 Fri. .	20 40 0		19 Mar. (78) .	1 Sun. .	119·5490	4017
24 Mar. (84) . .	1 Sun. .	2 52 30		7 Mar. (67) .	5 Thur. .	9995·2324†	4018
24 Mar. (83) . .	2 Mon. .	9 5 0		25 Feb. (56) .	3 Tues. .	209·5476	4019
24 Mar. (83) . .	3 Tues. .	15 17 30		16 Mar. (75) .	2 Mon. .	244·1872	4020

† As a mean tithi Chaitra Śukla 1 was suppressed. The civil day corresponding to it, *i.e.*, the first day of the luni-solar year was as given in cols. 19, 20.

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
						Jovian Saṁvatsara.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4021	842	977	326	94-95	919-20	13 Pramāthin .	14 Vikrama .	12 Phālguna .
4022	843	978	327	95-96	*920-21	14 Vikrama .	15 Vṛisha . .	...
4023	844	979	328	96-97	921-22	15 Vṛisha . .	16 Chitrabhānu .	...
4024	845	980	329	97-98	922-23	16 Chitrabhānu .	17 Subhānu .	8 Kārttika .
4025	846	981	330	98-99	923-24	17 Subhānu .	18 Tāraṇa . .	...
4026	847	982	331	99-00	*924-25	18 Tāraṇa . .	19 Pārthiva .	...
4027	848	983	332	100-01	925-26	19 Pārthiva .	20 Vyaya . .	5 Śrāvaṇa .
4028	849	984	333	101-02	926-27	20 Vyaya . .	21 Sarvajit. .	...
4029	850	985	334	102-03	927-28	21 Sarvajit .	22 Sarvadhārin .	...
4030	851	986	335	103-04	*928-29	22 Sarvadhārin .	23 Virōdhin .	1 Chaitra .
4031	852	987	336	104-05	929-30	23 Virōdhin .	24 Vikṛita . .	...
4032	853	988	337	105-06	930-31	24 Vikṛita . .	25 Khara . .	10 Pausha .
4033	854	989	338	106-07	931-32	25 Khara . .	26 Nandana .	...
4034	855	990	339	107-08	*932-33	26 Nandana .	27 Vijaya . .	...
4035	856	991	340	108-09	933-34	27 Vijaya . .	28 Jaya . .	6 Bhādrapada
4036	857	992	341	109-10	934-35	28 Jaya . .	29 Manmatha .	...
4037	858	993	342	110-11	935-36	29 Manmatha .	30 Durmukha .	...
4038	859	994	343	111-12	*936-37	30 Durmukha .	31 Hēmalamba .	3 Jyēshṭha .
4039	860	995	344	112-13	937-38	31 Hēmalamba .	32 Vilamba .	...
4040	861	996	345	113-14	938-39	32 Vilamba .	33 Vikārin .	11 Māgha .
4041	862	997	346	114-15	939-40	33 Vikārin .	34 Śārvarin .	...
4042	863	998	347	115-16	*940-41	34 Śārvarin .	35 Plava . .	...
4043	864	999	348	116-17	941-42	35 Plava . .	36 Śubhakrit .	8 Kārttika .
4044	865	1000	349	117-18	942-43	36 Śubhakṛit .	37 Śōbhana .	...
4045	866	1001	350	118-19	943-44	37 Śōbhana .	38 Krōdhin .	...

LXXVI—*contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							Kali year.
Mean solar year.				Mean luni-solar year (mean sunrise of civil day on which Chaitra Śukla 1 ends).			
Day and month, A. D.	Week-day.	Time of mean Mêsha-saṁkrânti.		Day and month, A. D.	Week-day.	a (here=t, the index of the tithi).	
13	14	17		19	20	23	1
		H. M.	S.				
24 Mar. (83) . .	4 Wed. .	21 30	0	5 Mar. (64) .	6 Fri. .	119·8706	4021
24 Mar. (84) . .	6 Fri. .	3 42	30	23 Mar. (83) .	5 Thur. .	154·5102	4022
24 Mar. (83) . .	0 Sat. .	9 55	0	12 Mar. (71) .	2 Mon. .	30·1936	4023
24 Mar. (83) . .	1 Sun. .	16 7	30	2 Mar. (61) .	0 Sat. .	244·5089	4024
24 Mar. (83) . .	2 Mon. .	22 20	0	21 Mar. (80) .	6 Fri. .	279·1485	4025
24 Mar. (84) . .	4 Wed. .	4 32	30	9 Mar. (69) .	3 Tues. .	154·8319	4026
24 Mar. (83) . .	5 Thur. .	10 45	0	26 Feb. (57) .	0 Sat. .	30·5153	4027
24 Mar. (83) . .	6 Fri. .	16 57	30	17 Mar. (76) .	6 Fri. .	65·1549	4028
24 Mar. (83) . .	0 Sat. .	23 10	0	7 Mar. (66) .	4 Wed. .	279·4701	4029
24 Mar. (84) . .	2 Mon. .	5 22	30	24 Feb. (55) .	1 Sun. .	155·1535	4030
24 Mar. (83) . .	3 Tues. .	11 35	0	14 Mar. (73) .	0 Sat. .	189·7932	4031
24 Mar. (83) . .	4 Wed. .	17 47	30	3 Mar. (62) .	4 Wed. .	65·4765	4032
25 Mar. (84) . .	6 Fri. .	0 0	0	22 Mar. (81) .	3 Tues. .	100·1162	4033
24 Mar. (84) . .	0 Sat. .	6 12	30	11 Mar. (71) .	1 Sun.	314·4314	4034
24 Mar. (83) . .	1 Sun. .	12 25	0	28 Feb. (59) .	5 Thur. .	190·1148	4035
24 Mar. (83) . .	2 Mon. .	18 37	30	19 Mar. (78) .	4 Wed. .	224·7544	4036
25 Mar. (84) . .	4 Wed. .	0 50	0	8 Mar. (67) .	1 Sun. .	100·4378	4037
24 Mar. (84) . .	5 Thur. .	7 2	30	26 Feb. (57) .	6 Fri. .	314·7531	4038
24 Mar. (83) . .	6 Fri. .	13 15	0	15 Mar. (74) .	4 Wed. .	10·7608	4039
24 Mar. (83) . .	0 Sat. .	19 27	30	5 Mar. (64) .	2 Mon. .	225·0661	4040
25 Mar. (84) . .	2 Mon. .	1 40	0	24 Mar. (83) .	1 Sun. .	259·7156	4041
24 Mar. (84) . .	3 Tues. .	7 52	30	12 Mar. (72) .	5 Thur. .	135·3991	4042
24 Mar. (83) .	4 Wed. .	14 5	0	1 Mar. (60) .	2 Mon. .	11·0825	4043
24 Mar. (83) . .	5 Thur. .	20 17	30	20 Mar. (79) .	1 Sun. .	45·7222	4044
25 Mar. (84) . .	0 Sat.	2 30	0	10 Mar. (69) .	6 Fri. .	260·0474	4045

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian saṁvatsara. Southern system.	Jovian saṁvatsara. Northern system.	
1	2	3	3a	4	5	6	7	8a
4046	867	1002	351	119-20	*944-45	38 Krōdhin .	39 Viśvāvasu .	5 Śrāvaṇa† .
4047	868	1003	352	120-21	945-46	39 Viśvāvasu .	40 Parābhava .	...
4048	869	1004	353	121-22	946-47	40 Parābhava .	41 Plavaṅga .	...
4049	870	1005	354	122-23	947-48	41 Plavaṅga .	42 Kīlaka . .	1 Chaitra .
4050	871	1006	355	123-24	*948-49	42 Kīlaka . .	43 Saumya. .	...
4051	872	1007	356	124-25	949-50	43 Saumya. .	44 Sādhāraṇa .	10 Pausha .
4052	873	1008	357	125-26	950-51	44 Sādhāraṇa .	45 Virōdhakṛit .	...
4053	874	1009	358	126-27	951-52	45 Virōdhakṛit .	46 Paridhāvin .	...
4054	875	1010	359	127-28	*952-53	46 Paridhāvin .	47 Pramādin .	6 Bhādrapada
4055	876	1011	360	128-29	953-54	47 Pramādin .	48 Ānanda .	...
4056	877	1012	361	129-30	954-55	48 Ānanda .	49 Rākshasa .	...
4057	878	1013	362	130-31	955-56	49 Rākshasa .	50 Anala . .	3 Jyēshṭha .
4058	879	1014	363	131-32	*956-57	50 Anala . .	51 Piṅgala .	...
4059	880	1015	364	132-33	957-58	51 Piṅgala .	52 Kālayukta .	11 Māgha .
4060	881	1016	365	133-34	958-59	52 Kālayukta .	53 Siddhārthin .	...
4061	882	1017	366	134-35	959-60	53 Siddhārthin .	54 Raudra .	...
4062	883	1018	367	135-36	*960-61	54 Raudra .	55 Durmati .	8 Kārttika .
4063	884	1019	368	136-37	961-62	55 Durmati .	56 Dundubhi .	...
4064	885	1020	369	137-38	962-63	56 Dundubhi .	57 Rudhirōdgārin	...
4065	886	1021	370	138-39	963-64	57 Rudhirōdgārin	58 Raktāksha .	4 Āshāḍha
4066	887	1022	371	139-40	*964-65	58 Raktāksha .	59 Krōdhana .	...
4067	888	1023	372	140-41	965-66	59 Krōdhana .	60 Kshaya .	...
4068	889	1024	373	141-42	966-67	60 Kshaya .	1 Prabhava .	1 Chaitra
4069	890	1025	374	142-43	967-68	1 Prabhava .	2 Vibhava .	...
4070	891	1026	375	143-44	*968-69	2 Vibhava .	3 Śukla . .	9 Mārgaśira .

† By the "*Indian Calendar*" the intercalated month was 4 Āshāḍha.

LXXVI—*contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							Kali year.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrānti. H. M. S.	Day and month, A.D.	Week-day.	a (here = t, the index of the tithi).		
13	14	17	19	20	23		1
24 Mar. (84) . .	1 Sun. .	8 42 30	27 Feb. (58) .	3 Tues. .	135·7207		4046
24 Mar. (83) . .	2 Mon. .	14 55 0	17 Mar. (76) .	2 Mon. .	170·3603		4047
24 Mar. (83) . .	3 Tues. .	21 7 30	6 Mar. (65) .	6 Fri. .	46·0436		4048
25 Mar. (84) . .	5 Thur. .	3 20 0	24 Feb. (55) .	4 Wed. .	260·3590		4049
24 Mar. (84) . .	6 Fri. .	9 32 30	14 Mar. (74) .	3 Tues. .	294·0986		4050
24 Mar. (83) . .	0 Sat. .	15 45 0	3 Mar. (62) .	0 Sat. .	170·6819		4051
24 Mar. (83) . .	1 Sun. .	21 57 30	22 Mar. (81) .	6 Fri. .	205·3216		4052
25 Mar. (84) . .	3 Tues. .	4 10 0	11 Mar. (70) .	3 Tues. .	81·0049		4053
24 Mar. (84) . .	4 Wed. .	10 22 30	29 Feb. (60) .	1 Sun. .	295·3203		4054
24 Mar. (83) . .	5 Thur. .	16 35 0	19 Mar. (78) .	0 Sat. .	329·9599		4055
24 Mar. (83) . .	6 Fri. .	22 47 30	8 Mar. (67) .	4 Wed. .	205·6432		4056
25 Mar. (84) . .	1 Sun. .	5 0 0	25 Feb. (56) .	1 Sun. .	81·3266		4057
24 Mar. (84) . .	2 Mon. .	11 12 30	15 Mar. (75) .	0 Sat. .	115·9662		4058
24 Mar. (83) . .	3 Tues. .	17 25 0	5 Mar. (64) .	5 Thur. .	330·2815		4059
24 Mar. (83) . .	4 Wed. .	23 37 30	23 Mar. (82) .	3 Tues. .	26·2892		4060
25 Mar. (84) . .	6 Fri. .	5 50 0	13 Mar. (72) .	1 Sun. .	240·6045		4061
24 Mar. (84) . .	0 Sat. .	12 2 30	1 Mar. (61) .	5 Thur. .	116·2879		4062
24 Mar. (83) . .	1 Sun. .	18 15 0	20 Mar. (79) .	4 Wed. .	150·9275		4063
25 Mar. (84) . .	3 Tues. .	0 27 30	9 Mar. (68) .	1 Sun. .	26·6109		4064
25 Mar. (84) . .	4 Wed. .	6 40 0	27 Feb. (58) .	6 Fri. .	240·9262		4065
24 Mar. (84) . .	5 Thur. .	12 52 30	17 Mar. (77) .	5 Thur. .	275·5658		4066
24 Mar. (83) . .	6 Fri. .	19 5 0	6 Mar. (65) .	2 Mon. .	151·2491		4067
25 Mar. (84) . .	1 Sun. .	1 17 30	23 Feb. (54) .	6 Fri. .	26·9325		4068
25 Mar. (84) . .	2 Mon. .	7 30 0	14 Mar. (73) .	5 Thur. .	61·5721		4069
24 Mar. (84) . .	3 Tues. .	13 42 30	3 Mar. (63) .	3 Tues. .	275·8874		4070

TABLE

CONCURRENT YEAR.						Jovian Saṁvatsara.		Mean Intercalated (adhika) lunar month.
Kali.	Saka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	8	8a
4071	892	1027	376	144-45	969-70	3 Śukla	4 Pramōda	...
4072	893	1028	377	145-46	970-71	4 Pramōda	5 Prajāpati	...
4073	894	1029	378	146-47	971-72	5 Prajāpati	6 Aṅgiras	6 Bhādrapada
4074	895	1030	379	147-48	*972-73	6 Aṅgiras	7 Śrīmukha	...
4075	896	1031	380	148-49	973-74	7 Śrīmukha	8 Bhāva	...
4076	897	1032	381	149-50	974-75	8 Bhāva	9 Yuvan	2 Vaiśākha
4077	898	1033	382	150-51	975-76	9 Yuvan	10 Dhātṛi	...
4078	899	1034	383	151-52	*976-77	10 Dhātṛi	11 Īśvara	11 Māgha
4079	900	1035	384	152-53	977-78	11 Īśvara	12 Bahudhānya	...
4080	901	1036	385	153-54	978-79	12 Bahudhānya	13 Pramāthin	...
4081	902	1037	386	154-55	979-80	13 Pramāthin	14 Vikrama	8 Kārttika †
4082	903	1038	387	155-56	*980-81	14 Vikrama	15 Vṛisha	...
4083	904	1039	388	156-57	981-82	15 Vṛisha	16 Chitrabhānu	...
4084	905	1040	389	157-58	982-83	16 Chitrabhānu	17 Subhānu	4 Āshāḍha
4085	906	1041	390	158-59	983-84	17 Subhānu	18 Tāraṇa	...
4086	907	1042	391	159-60	*984-85	18 Tāraṇa	19 Pārthiva	...
4087	908	1043	392	160-61	985-86	19 Pārthiva	20 Vyaya	1 Chaitra
4088	909	1044	393	161-62	986-87	20 Vyaya	21 Sarvajit	...
4089	910	1045	394	162-63	987-88	21 Sarvajit	22 Sarvadhārin	9 Mārgaśira
4090	911	1046	395	163-64	*988-89	22 Sarvadhārin	23 Virōdhin	...
4091	912	1047	396	164-65	989-90	23 Virōdhin	24 Vikṛita ‡	...
4092	913	1048	397	165-66	990-91	24 Vikṛita	26 *Nandana*	6 Bhādrapada
4093	914	1049	398	166-67	991-92	25 Khara	27 *Vijaya*	...
4094	915	1050	399	167-68	*992-93	26 Nandana	28 *Jaya*	...
4095	916	1051	400	168-69	993-94	27 Vijaya	29 *Manmatha*	2 Vaiśākha

† By the "*Indian Calendar*" 7 Āśvina was intercalated.

‡ 25 Khara was expunged in the north by the mean system, but 26 Nandana by the true system. By the true system the year A.D. 990-91 was, in the north, called "Khara."

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE									Kali year.
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrānti.			Day and month, A.D.	Week-day.	a (here=t, the index of the tithi).		
13	14	17			19	20	23		1
		H.	M.	S.					
24 Mar. (83) .	4 Wed.	19	55	0	22 Mar. (81)	2 Mon.	310·5271		4071
25 Mar. (84) .	6 Fri.	2	7	30	11 Mar. (70)	6 Fri.	186·2104		4072
25 Mar. (84) .	0 Sat.	8	20	0	28 Feb. (59)	3 Tues.	61·8939		4073
24 Mar. (84) .	1 Sun.	14	32	30	18 Mar. (78)	2 Mon.	96·5335		4074
24 Mar. (83) .	2 Mon.	20	45	0	8 Mar. (67)	0 Sat.	310·8487		4075
25 Mar. (84) .	4 Wed.	2	57	30	25 Feb. (56)	4 Wed.	186·5321		4076
25 Mar. (84) .	5 Thur.	9	10	0	16 Mar. (75)	3 Tues.	221·1716		4077
24 Mar. (84) .	6 Fri.	15	22	30	4 Mar. (64)	0 Sat.	96·8550		4078
24 Mar. (83) .	0 Sat.	21	35	0	23 Mar. (82)	6 Fri.	131·4946		4079
25 Mar. (84) .	2 Mon.	3	47	30	12 Mar. (71)	3 Tues.	7·1781		4080
25 Mar. (84) .	3 Tues.	10	0	0	2 Mar. (61)	1 Sun.	221·4933		4081
24 Mar. (84) .	4 Wed.	16	12	30	20 Mar. (80)	0 Sat.	256·1329		4082
24 Mar. (83) .	5 Thur.	22	25	0	9 Mar. (68)	4 Wed.	131·8163		4083
25 Mar. (84) .	0 Sat.	4	37	30	26 Feb. (57)	1 Sun.	7·4998		4084
25 Mar. (84) .	1 Sun.	10	50	0	17 Mar. (76)	0 Sat.	41·1393		4085
24 Mar. (84) .	2 Mon.	17	2	30	6 Mar. (66)	5 Thur.	256·4546		4086
24 Mar. (83) .	3 Tues.	23	15	0	23 Feb. (54)	2 Mon.	132·1379		4087
25 Mar. (84) .	5 Thur.	5	27	30	14 Mar. (73)	1 Sun.	166·7776		4088
25 Mar. (84) .	6 Fri.	11	40	0	3 Mar. (62)	5 Thur.	42·4610		4089
24 Mar. (84) .	0 Sat.	17	52	30	21 Mar. (81)	4 Wed.	77·1006		4090
25 Mar. (84) .	2 Mon.	0	5	0	11 Mar. (70)	2 Mon.	291·4158		4091
25 Mar. (84) .	3 Tues.	6	17	30	28 Feb. (59)	6 Fri.	167·0992		4092
25 Mar. (84) .	4 Wed.	12	30	0	19 Mar. (78)	5 Thur.	201·7389		4093
24 Mar. (84) .	5 Thur.	18	42	30	7 Mar. (67)	2 Mon.	77·4222		4094
25 Mar. (84) .	0 Sat.	0	55	0	25 Feb. (56)	0 Sat.	291·7375		4095

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	Mean Intercalated (adhika) lunar month.
1	2	3	3a	4	5	6	7	8a
4096	917	1052	401	169-70	994-95	28 Jaya . .	30 *Durmukha* .	...
4097	918	1053	402	170-71	995-96	29 Manmatha .	31 Hēmalamba .	11 Māgha .
4098	919	1054	403	171-72	*996-97	30 Durmukha .	32 Vilamba .	...
4099	920	1055	404	172-73	997-98	31 Hēmalamba .	33 Vikārin .	...
4100	921	1056	405	173-74	998-99	32 Vilamba .	34 Śārvarin .	7 Āsvina .
4101	922	1057	406	174-75	999-000	33 Vikārin .	35 Plava . .	...
4102	923	1058	407	175-76	*1000-01	34 Śārvarin .	36 Śubhakṛit .	...
4103	924	1059	408	176-77	1001-02	35 Plava . .	37 Śōbhana .	4 Āshāḍha .
4104	925	1060	409	177-78	1002-03	36 Śubhakṛit .	38 Krōdhin .	...
4105	926	1061	410	178-79	1003-04	37 Śōbhana .	39 Viśvāvasu .	12 Phālguna .
4106	927	1062	411	179-80	*1004-05	38 Krōdhin .	40 Parābhava .	...
4107	928	1063	412	180-81	1005-06	39 Viśvāvasu .	41 Plavaṅga .	...
4108	929	1064	413	181-82	1006-07	40 Parābhava .	42 Kīlaka . .	9 Mārgaśira .
4109	930	1065	414	182-83	1007-08	41 Plavaṅga .	43 Saumya .	...
4110	931	1066	415	183-84	*1008-09	42 Kīlaka . .	44 Sādhāraṇa .	...
4111	932	1067	416	184-85	1009-10	43 Saumya .	45 Virōdhakṛit .	5 Śrāvaṇa .
4112	933	1068	417	185-86	1010-11	44 Sādhāraṇa .	46 Paridhāvin .	...
4113	934	1069	418	186-87	1011-12	45 Virōdhakṛit .	47 Pramādin .	...
4114	935	1070	419	187-88	*1012-13	46 Paridhāvin .	48 Ānanda .	2 Vaiśākha .
4115	936	1071	420	188-89	1013-14	47 Pramādin .	49 Rākshasa .	...
4116	937	1072	421	189-90	1014-15	48 Ānanda .	50 Anala . .	10 Pausha .
4117	938	1073	422	190-91	1015-16	49 Rākshasa .	51 Piṅgala .	...
4118	939	1074	423	191-92	*1016-17	50 Anala . .	52 Kālayukta .	...
4119	940	1075	424	192-93	1017-18	51 Piṅgala .	53 Siddhārthin .	7 Āśvina .
4120	941	1076	425	193-94	1018-19	52 Kālayukta .	54 Raudra . .	...

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mésha-saṁkrānti.	Day and month, A.D.	Week-day.	a (here=t, the index of the tithi).	
13	14	17	19	20	23	1
		H. M. S.				
25 Mar. (84) . .	1 Sun. .	7 7 30	16 Mar. (75) .	6 Fri. .	326·3771	4096
25 Mar. (84) . .	2 Mon. .	13 20 0	5 Mar. (64) .	3 Tues. .	202·0605	4097
24 Mar. (84) . .	3 Tues. .	19 32 30	23 Mar. (83) .	2 Mon. .	236·7001	4098
25 Mar. (84) . .	5 Thur. .	1 45 0	12 Mar. (71) .	6 Fri. .	112·3835	4099
25 Mar. (84) . .	6 Fri. .	7 57 30	2 Mar. (61) .	4 Wed. .	326·6988	4100
25 Mar. (84) . .	0 Sat. .	14 10 0	20 Mar. (79) .	2 Mon. .	22·7065	4101
24 Mar. (84) . .	1 Sun. .	20 22 30	9 Mar. (69) .	0 Sat .	237·0218	4102
25 Mar. (84) . .	3 Tues. .	2 35 0	26 Feb. (57) .	4 Wed. .	112·7052	4103
25 Mar. (84) . .	4 Wed. .	8 47 30	17 Mar. (76) .	3 Tues. .	147·3448	4104
25 Mar. (84) . .	5 Thur. .	15 0 0	6 Mar. (65) .	0 Sat. .	23·0272	4105
24 Mar. (84) . .	6 Fri. .	21 12 30	24 Mar. (84) .	6 Fri. .	57·6667	4106
25 Mar. (84) . .	1 Sun. .	3 25 0	14 Mar. (73) .	4 Wed. .	271·9831	4107
25 Mar. (84) . .	2 Mon. .	9 37 30	3 Mar. (62) .	1 Sun. .	147·6665	4108
25 Mar. (84) . .	3 Tues. .	15 50 0	22 Mar. (81) .	0 Sat. .	182·3061	4109
24 Mar. (84) . .	4 Wed. .	22 2 30	10 Mar. (70) .	4 Wed. .	57·9894	4110
25 Mar. (84) . .	6 Fri. .	4 15 0	28 Feb. (59) .	2 Mon. .	272·3047	4111
25 Mar. (84) . .	0 Sat. .	10 27 30	19 Mar. (78) .	1 Sun. .	306·9444	4112
25 Mar. (84) .	1 Sun. .	16 40 0	8 Mar. (67) .	5 Thur. .	182·6277	4113
24 Mar. (84) . .	2 Mon. .	22 52 30	25 Feb. (56) .	2 Mon. .	58·3111	4114
25 Mar. (84) . .	4 Wed .	5 5 0	15 Mar. (74) .	1 Sun. .	92·9507	4115
25 Mar. (84) . .	5 Thur. .	11 17 30	5 Mar. (64) .	6 Fri. .	307·2659	4116
25 Mar. (84) . .	6 Fri. .	17 30 0	23 Mar. (82) .	4 Wed. .	3·2737	4117
24 Mar. (84) . .	0 Sat. .	23 42 30	12 Mar. (72) .	2 Mon. .	217·5890	4118
25 Mar. (84) . .	2 Mon. .	5 55 0	1 Mar. (60) .	6 Fri. .	93·2723	4119
25 Mar. (84) . .	3 Tues. .	12 7 30	20 Mar. (79) .	5 Thur. .	127·9119	4120

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara.		
						Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4121	942	1077	426	194-95	1019-20	53 Siddhārthin .	55 Durmati .	...
4122	943	1078	427	195-96	*1020-21	54 Raudra .	56 Dundubhi .	4 Āshāḍha ‡ .
4123	944	1079	428	196-97	1021-22	55 Durmati .	57 Rudhirōdgārin	...
4124	945	1080	429	197-98	1022-23	56 Dundubhi .	58 Raktāksha .	12 Phālguna .
4125	946	1081	430	198-99	1023-24	57 Rudhirōdgārin	59 Krōdhana .	...
4126	947	1082	431	199-00	*1024-25	58 Raktāksha .	60 Kshaya .	...
4127	948	1083	432	200-01	1025-26	59 Krōdhana .	1 Prabhava .	9 Mārgaśira .
4128	949	1084	433	201-02	1026-27	60 Kshaya .	2 Vibhava .	...
4129	950	1085	434	202-03	1027-28	1 Prabhava .	3 Śukla . .	...
4130	951	1086	435	203-04	*1028-29	2 Vibhava .	4 Pramōda .	5 Śrāvaṇa .
4131	952	1087	436	204-05	1029-30	3 Śukla . .	5 Prajāpati .	...
4132	953	1088	437	205-06	1030-31	4 Pramōda .	6 Aṅgiras .	...
4133	954	1089	438	206-07	1031-32	5 Prajāpati .	7 Śrīmukha .	2 Vaiśākha .
4134	955	1090	439	207-08	*1032-33	6 Aṅgiras .	8 Bhāva . .	...
4135	956	1091	440	208-09	1033-34	7 Śrīmukha .	9 Yuvan . .	10 Pausha .
4136	957	1092	441	209-10	1034-35	8 Bhāva . .	10 Dhātṛi . .	...
4137	958	1093	442	210-11	1035-36	9 Yuvan . .	11 Īśvara . .	...
4138	959	1094	443	211-12	*1036-37	10 Dhātṛi . .	12 Bahudhānya .	7 Āśvina .
4139	960	1095	444	212-13	1037-38	11 Īśvara . .	13 Pramāthin .	...
4140	961	1096	445	213-14	1038-39	12 Bahudhānya .	14 Vikrama .	...
4141	962	1097	446	214-15	1039-40	13 Pramāthin .	15 Vṛisha . .	3 Jyēshṭha .
4142	963	1098	447	215-16	*1040-41	14 Vikrama .	16 Chitrabhānu .	...
4143	964	1099	448	216-17	1041-42	15 Vṛisha . .	17 Subhānu .	12 Phālguna .
4144	965	1100	449	217-18	1042-43	16 Chitrabhānu .	18 Tāraṇa . .	...
4145	966	1101	450	218-19	1043-44	17 Subhānu .	19 Pārthiva .	...

‡ By the "*Indian Calendar*" 3 Jyēshṭha was intercalated.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE									Kali year.
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mésha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here=*t*, the index of the tithi).		
13	14	17			19	20	23		1
		H.	M.	S.					
25 Mar. (84) . .	4 Wed. .	18	20	0	9 Mar. (68) .	2 Mon. .	3·5953		4121
25 Mar. (85) . .	6 Fri. .	0	32	30	27 Feb. (58) .	0 Sat. .	217·8106		4122
25 Mar. (84) . .	0 Sat. .	6	45	0	17 Mar. (76) .	6 Fri. .	252·5502		4123
25 Mar. (84) . .	1 Sun. .	12	57	30	6 Mar. (65) .	3 Tues. .	128·2336		4124
25 Mar. (84) . .	2 Mon. .	19	10	0	25 Mar. (84) .	2 Mon. .	162·8732		4125
25 Mar. (85) . .	4 Wed. .	1	22	30	13 Mar. (73) .	6 Fri. .	38·5566		4126
25 Mar. (84) . .	5 Thur. .	7	35	0	3 Mar. (62) .	4 Wed. .	252·8719		4127
25 Mar. (84) . .	6 Fri. .	13	47	30	22 Mar. (81) .	3 Tues. .	287·5115		4128
25 Mar. (84) . .	0 Sat. .	20	0	0	11 Mar. (70) .	0 Sat. .	163·1948		4129
25 Mar. (85) . .	2 Mon. .	2	12	30	28 Feb. (59) .	4 Wed. .	38·8782		4130
25 Mar. (84) . .	3 Tues. .	8	25	0	18 Mar. (77) .	3 Tues. .	73·5179		4131
25 Mar. (84) . .	4 Wed. .	14	37	30	8 Mar. (67) .	1 Sun. .	287·8331		4132
25 Mar. (84) . .	5 Thur. .	20	50	0	25 Feb. (56) .	5 Thur. .	163·5165		4133
25 Mar. (85) . .	0 Sat. .	3	2	30	15 Mar. (75) .	4 Wed. .	198·1561		4134
25 Mar. (84) . .	1 Sun. .	9	15	0	4 Mar. (63) .	1 Sun. .	73·8395		4135
25 Mar. (84) . .	2 Mon. .	15	27	30	23 Mar. (82) .	0 Sat. .	108·4791		4136
25 Mar. (84) . .	3 Tues. .	21	40	0	13 Mar. (72) .	5 Thur. .	322·7944		4137
25 Mar. (85) . .	5 Thur. .	3	52	30	1 Mar. (61) .	2 Mon. .	198·4778		4138
25 Mar. (84) . .	6 Fri. .	10	5	0	20 Mar. (79) .	1 Sun. .	233·1174		4139
25 Mar. (84) . .	0 Sat. .	16	17	30	9 Mar. (68) .	5 Thur. .	108·8008		4140
25 Mar. (84) . .	1 Sun. .	22	30	0	27 Feb. (58) .	3 Tues. .	323·1161		4141
25 Mar. (85) . .	3 Tues. .	4	42	30	16 Mar. (76) .	1 Sun. .	19·1238		4142
25 Mar. (84) . .	4 Wed. .	10	55	0	6 Mar. (65) .	6 Fri. .	233·4391		4143
25 Mar. (84) . .	5 Thur. .	17	7	30	25 Mar. (84) .	5 Thur. .	268·0787		4144
25 Mar. (84) . .	6 Fri. .	23	20	0	14 Mar. (73) .	2 Mon. .	143·7621		4145

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	
1	2	3	3a	4	5	6	7	8a
4146	967	1102	451	219-20	*1044-45	18 Târaṇa . .	20 Vyaya . .	8 Kârttika .
4147	968	1103	452	220-21	1045-46	19 Pârthiva .	21 Sarvajit .	...
4148	969	1104	453	221-22	1046-47	20 Vyaya . .	22 Sarvadhârin .	...
4149	970	1105	454	222-23	1047-48	21 Sarvajit .	23 Virôdhin .	5 Srâvaṇa .
4150	971	1106	455	223-24	*1048-49	22 Sarvadhârin .	24 Vikṛita . .	...
4151	972	1107	456	224-25	1049-50	23 Virôdhin .	25 Khara . .	...
4152	973	1108	457	225-26	1050-51	24 Vikṛita . .	26 Nandana .	1 Chaitra .
4153	974	1109	458	226-27	1051-52	25 Khara . .	27 Vijaya . .	...
4154	975	1110	459	227-28	*1052-53	26 Nandana .	28 Jaya . .	10 Pausha .
4155	976	1111	460	228-29	1053-54	27 Vijaya . .	29 Manmatha .	...
4156	977	1112	461	229-30	1054-55	28 Jaya . .	30 Durmukha .	...
4157	978	1113	462	230-31	1055-56	29 Manmatha .	31 Hêmalamba .	7 Âśvina† .
4158	979	1114	463	231-32	*1056-57	30 Durmukha .	32 Vilamba .	...
4159	980	1115	464	232-33	1057-58	31 Hêmalamba .	33 Vikârin .	...
4160	981	1116	465	233-34	1058-59	32 Vilamba .	34 Śârvarin .	3 Jyêshṭha .
4161	982	1117	466	234-35	1059-60	33 Vikârin .	35 Plava . .	...
4162	983	1118	467	235-36	*1060-61	34 Śârvarin .	36 Śubhakṛit .	12 Phâlguna .
4163	984	1119	468	236-37	1061-62	35 Plava . .	37 Śôbhana .	...
4164	985	1120	469	237-38	1062-63	36 Śubhakṛit .	38 Krôdhin .	...
4165	986	1121	470	238-39	1063-64	37 Śôbhana .	39 Viśvâvasu .	8 Kârttika .
4166	987	1122	471	239-40	*1064-65	38 Krôdhin .	40 Parâbhava .	...
4167	988	1123	472	240-41	1065-66	39 Viśvâvasu .	41 Plavaṅga .	...
4168	989	1124	473	241-42	1066-67	40 Parâbhava .	42 Kîlaka . .	5 Śrâvaṇa .
4169	990	1125	474	242-43	1067-68	41 Plavaṅga .	43 Saumya .	...
4170	991	1126	475	243-44	*1068-69	42 Kîlaka . .	44 Sâdhâraṇa .	...

† By the "*Indian Calendar*" 6 Bhâdrapada was the intercalated month.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	a (here=t, the index of the tithi).	
13	14	17	19	20	23	1
		H. M. S.				
25 Mar. (85) .	1 Sun.	5 32 30	2 Mar. (62)	6 Fri.	19·4454	4146
25 Mar. (84) .	2 Mon.	11 45 0	21 Mar. (80)	5 Thur.	54·0850	4147
25 Mar. (84) .	3 Tues.	17 57 30	11 Mar. (70)	3 Tues.	268·4003	4148
26 Mar. (85) .	5 Thur.	0 10 0	28 Feb. (59)	0 Sat.	144·0838	4149
25 Mar. (85) .	6 Fri.	6 22 30	18 Mar. (78)	6 Fri.	178·7233	4150
25 Mar. (84) .	0 Sat.	12 35 0	7 Mar. (66)	3 Tues.	54·4067	4151
25 Mar. (84) .	1 Sun.	18 47 30	25 Feb. (56)	1 Sun.	268·7219	4152
26 Mar. (85) .	3 Tues.	1 0 0	16 Mar. (75)	0 Sat.	303·3615	4153
25 Mar. (85) .	4 Wed.	7 12 30	4 Mar. (64)	4 Wed.	179·0449	4154
25 Mar. (84) .	5 Thur.	13 25 0	23 Mar. (82)	3 Tues.	213·6845	4155
25 Mar. (84) .	6 Fri.	19 37 30	12 Mar. (71)	0 Sat.	89·3679	4156
26 Mar. (85) .	1 Sun.	1 50 0	2 Mar. (61)	5 Thur.	303·0832	4157
25 Mar. (85) .	2 Mon.	8 2 30	19 Mar. (79)	3 Tues.	9999·6909 §	4158
25 Mar. (84) .	3 Tues.	14 15 0	9 Mar. (68)	1 Sun.	214·0062	4159
25 Mar. (84) .	4 Wed.	20 27 30	26 Feb. (57)	5 Thur.	89·6896	4160
26 Mar. (85) .	6 Fri.	2 40 0	17 Mar. (76)	4 Wed.	124·3292	4161
25 Mar. (85) .	0 Sat.	8 52 30	5 Mar. (65)	1 Sun.	0·0126	4162
25 Mar. (84) .	1 Sun.	15 5 0	24 Mar. (83)	0 Sat.	34·6522	4163
25 Mar. (84) .	2 Mon.	21 17 30	14 Mar. (73)	5 Thur.	248·9675	4164
26 Mar. (85) .	4 Wed.	3 30 0	3 Mar. (62)	2 Mon.	124·6508	4165
25 Mar. (85) .	5 Thur.	9 42 30	21 Mar. (81)	1 Sun.	159·2905	4166
25 Mar. (84) .	6 Fri.	15 55 0	10 Mar. (69)	5 Thur.	34·9739	4167
25 Mar. (84) .	0 Sat.	22 7 30	28 Feb. (59)	3 Tues.	249·2892	4168
26 Mar. (85) .	2 Mon.	4 20 0	19 Mar. (78)	2 Mon.	283·9288	4169
25 Mar. (85) .	3 Tues.	10 32 30	7 Mar. (67)	6 Fri.	159·6122	4170

§ As a mean tithi Chaitra Śukla 1 was expunged. The civil day corresponding to it, *i.e.*, the first day of the luni-solar year was as given in cols. 19, 20.

TABLE

CONCURRENT YEAR.								
						Jovian Saṁvatsara.		Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4171	992	1127	476	244-45	1069-70	43 Saumya	45 Virōdhakṛit	1 Chaitra
4172	993	1128	477	245-46	1070-71	44 Sādhāraṇa	46 Paridhāvin	...
4173	994	1129	478	246-47	1071-72	45 Virōdhakṛit	47 Pramādin	10 Pausha
4174	995	1130	479	247-48	*1072-73	46 Paridhāvin	48 Ānanda	...
4175	996	1131	480	248-49	1073-74	47 Pramādin	49 Rākshasa	...
4176	997	1132	481	249-50	1074-75	48 Ānanda	50 Anala	6 Bhādrapada
4177	998	1133	482	250-51	1075-76	49 Rākshasa	51 Piṅgala †	...
4178	999	1134	483	251-52	*1076-77	50 Anala	53 *Siddhārthin*	...
4179	1000	1135	484	252-53	1077-78	51 Piṅgala	54 *Raudra*	3 Jyēshṭha
4180	1001	1136	485	253-54	1078-79	52 Kālayukta	55 *Durmati*	...
4181	1002	1137	486	254-55	1079-80	53 Siddhārthin	56 *Dundubhi*	11 Māgha
4182	1003	1138	487	255-56	*1080-81	54 Raudra	57 Rudhirōdgārin	...
4183	1004	1139	488	256-57	1081-82	55 Durmati	58 Raktāksha	...
4184	1005	1140	489	257-58	1082-83	56 Dundubhi	59 Krōdhana	8 Kārttika
4185	1006	1141	490	258-59	1083-84	57 Rudhirōdgārin	60 Kshaya	...
4186	1007	1142	491	259-60	*1084-85	58 Raktāksha	1 Prabhava	...
4187	1008	1143	492	260-61	1085-86	59 Krōdhana	2 Vibhava	4 Āshāḍha
4188	1009	1144	493	261-62	1086-87	60 Kshaya	3 Śukla	...
4189	1010	1145	494	262-63	1087-88	1 Prabhava	4 Pramōda	...
4190	1011	1146	495	263-64	*1088-89	2 Vibhava	5 Prajāpati	1 Chaitra
4191	1012	1147	496	264-65	1089-90	3 Śukla	6 Aṅgiras	...
4192	1013	1148	497	265-66	1090-91	4 Pramōda	7 Śrīmukha	9 Mārgaśira
4193	1014	1149	498	266-67	1091-92	5 Prajāpati	8 Bhāva	...
4194	1015	1150	499	267-68	*1092-93	6 Aṅgiras	9 Yuvan	...
4195	1016	1151	500	268-69	1093-94	7 Śrīmukha	10 Dhātṛi	6 Bhādrapada

† 52 Kālayukta was suppressed in the north.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here=*t*, the index of the tithi).	.
13	14	17	19	20	23	1
		H. M. S.				
25 Mar. (84) .	4 Wed.	16 45 0	24 Feb. (55)	3 Tues.	35·2955	4171
25 Mar. (84) .	5 Thur.	22 57 30	15 Mar. (74)	2 Mon.	69·9351	4172
26 Mar. (85)	0 Sat.	5 10 0	5 Mar. (64)	0 Sat.	284·2504	4173
25 Mar. (85) .	1 Sun.	11 22 30	23 Mar. (83)	6 Fri.	318·8901	4174
25 Mar. (84) .	2 Mon.	17 35 0	12 Mar. (71)	3 Tues.	194·5734	4175
25 Mar. (84) .	3 Tues.	23 47 30	1 Mar. (60)	0 Sat.	70·2568	4176
26 Mar. (85) .	5 Thur.	6 0 0	20 Mar. (79)	6 Fri.	104·8964	4177
25 Mar. (85) .	6 Fri.	12 12 30	9 Mar. (69)	4 Wed.	319·2116	4178
25 Mar. (84) .	0 Sat.	18 25 0	26 Feb. (57)	1 Sun.	194·8950	4179
26 Mar. (85) .	2 Mon.	0 37 30	17 Mar. (76)	0 Sat.	229·5347	4180
26 Mar. (85) .	3 Tues.	6 50 0	6 Mar. (65)	4 Wed.	105·2180	4181
25 Mar. (85) .	4 Wed.	13 2 30	24 Mar. (84)	3 Tues.	139·8576	4182
25 Mar. (84) .	5 Thur.	19 15 0	13 Mar. (72)	0 Sat.	15·5410	4183
26 Mar. (85) .	0 Sat.	1 27 30	3 Mar. (62)	5 Thur.	229·8563	4184
26 Mar. (85) .	1 Sun.	7 40 0	22 Mar. (81)	4 Wed.	264·4959	4185
25 Mar. (85) .	2 Mon.	13 52 30	10 Mar. (70)	1 Sun.	140·1793	4186
25 Mar. (84) .	3 Tues.	20 5 0	27 Feb. (58)	5 Thur.	15·8627	4187
26 Mar. (85) .	5 Thur.	2 17 30	18 Mar. (77)	4 Wed.	50·5023	4188
26 Mar. (85) .	6 Fri.	8 30 0	8 Mar. (67)	2 Mon.	264·8176	4189
25 Mar. (85) .	0 Sat.	14 42 30	25 Feb. (56)	6 Fri.	140·5009	4190
25 Mar. (84) .	1 Sun.	20 55 0	15 Mar. (74)	5 Thur.	175·1405	4191
26 Mar. (85) .	3 Tues.	3 7 30	4 Mar. (63)	2 Mon.	50·8239	4192
26 Mar. (85) .	4 Wed.	9 20 0	23 Mar. (82)	1 Sun.	85·4636	4193
25 Mar. (85) .	5 Thur.	15 32 30	12 Mar. (72)	6 Fri.	299·7788	4194
25 Mar. (84) .	6 Fri.	21 45 0	1 Mar. (60)	3 Tues.	175·4622	4195

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	
1	2	3	3a	4	5	6	7	8a
4196	1017	1152	501	269-70	1094-95	8 Bhāva . .	11 Īśvara . .	...
4197	1018	1153	502	270-71	1095-96	9 Yuvan . .	12 Bahudhānya .	...
4198	1019	1154	503	271-72	*1096-97	10 Dhātṛi . .	13 Pramāthin .	3 Jyēshṭha † .
4199	1020	1155	504	272-73	1097-98	11 Īśvara . .	14 Vikrama .	...
4200	1021	1156	505	273-74	1098-99	12 Bahudhānya .	15 Vṛisha . .	11 Māgha .
4201	1022	1157	506	274-75	1099-00	13 Pramāthin .	16 Chitrabhānu .	...
4202	1023	1158	507	275-76	*1100-01	14 Vikrama .	17 Subhānu .	...
4203	1024	1159	508	276-77	1101-02	15 Vṛisha . .	18 Tāraṇa . .	8 Kārttika .
4204	1025	1160	509	277-78	1102-03	16 Chitrabhānu .	19 Pārthiva .	...
4205	1026	1161	510	278-79	1103-04	17 Subhānu .	20 Vyaya . .	...
4206	1027	1162	511	279-80	*1104-05	18 Tāraṇa . .	21 Sarvajit .	4 Āshāḍha .
4207	1028	1163	512	280-81	1105-06	19 Pārthiva .	22 Sarvadhārin .	...
4208	1029	1164	513	281-82	1106-07	20 Vyaya . .	23 Virōdhin .	...
4209	1030	1165	514	282-83	1107-08	21 Sarvajit .	24 Vikṛita . .	1 Chaitra .
4210	1031	1166	515	283-84	*1108-09	22 Sarvadhārin .	25 Khara . .	...
4211	1032	1167	516	284-85	1109-10	23 Virōdhin .	26 Nandana .	9 Mārgaśira .
4212	1033	1168	517	285-86	1110-11	24 Vikṛita . .	27 Vijaya . .	...
4213	1034	1169	518	286-87	1111-12	25 Khara . .	28 Jaya . .	...
4214	1035	1170	519	287-88	*1112-13	26 Nandana .	29 Manmatha .	6 Bhādrapada
4215	1036	1171	520	288-89	1113-14	27 Vijaya . .	30 Durmukha .	...
4216	1037	1172	521	289-90	1114-15	28 Jaya . .	31 Hēmalamba .	...
4217	1038	1173	522	290-91	1115-16	29 Manmatha .	32 Vilamba .	2 Vaiśākha .
4218	1039	1174	523	291-92	*1116-17	30 Durmukha .	33 Vikārin .	...
4219	1040	1175	524	292-93	1117-18	31 Hēmalamba .	34 Śārvarin .	11 Māgha .
4220	1041	1176	525	293-94	1118-19	32 Vilamba .	35 Plava . .	...

† By the "*Indian Calendar*" 2 Vaiśākha was intercalated.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here=*t*, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
26 Mar. (85) . .	1 Sun. .	3	57	30	20 Mar. (79) .	2 Mon. .	210·1018	4196
26 Mar. (85) . .	2 Mon. .	10	10	0	9 Mar. (68) .	6 Fri. .	85·7852	4197
25 Mar. (85) . .	3 Tues. .	16	22	30	27 Feb. (58) .	4 Wed. .	300·1005	4198
25 Mar. (84) . .	4 Wed. .	22	35	0	16 Mar. (75) .	2 Mon. .	9996·1082†	4199
26 Mar. (85) . .	6 Fri. .	4	47	30	6 Mar. (65) .	0 Sat. .	210·4235	4200
26 Mar. (85) . .	0 Sat. .	11	0	0	25 Mar. (84) .	6 Fri. .	245·0630	4201
25 Mar. (85) . .	1 Sun. .	17	12	30	13 Mar. (73) .	3 Tues. .	120·7464	4202
25 Mar. (84) . .	2 Mon. .	23	25	0	2 Mar. (61) .	0 Sat. .	9996·4298†	4203
26 Mar. (85) . .	4 Wed. .	5	37	30	21 Mar. (80) .	[illegible] Fri. .	31·0694	4204
26 Mar. (85) . .	5 Thur. .	11	50	0	11 Mar. (70) .	4 Wed. .	245·3847	4205
25 Mar. (85) . .	6 Fri. .	18	2	30	28 Feb. (59) .	1 Sun. .	121·0681	4206
26 Mar. (85) . .	1 Sun. .	0	15	0	18 Mar. (77) .	0 Sat. .	155·7077	4207
26 Mar. (85) . .	2 Mon. .	6	27	30	7 Mar. (66) .	4 Wed. .	31·3911	4208
26 Mar. (85) . .	3 Tues. .	12	40	0	25 Feb. (56) .	2 Mon. .	245·7063	4209
25 Mar. (85) . .	4 Wed. .	18	52	30	15 Mar. (75) .	1 Sun. .	280·3460	4210
26 Mar. (85) . .	6 Fri. .	1	5	0	4 Mar. (63) .	5 Thur. .	156·0293	4211
26 Mar. (85) . .	0 Sat. .	7	17	30	23 Mar. (82) .	4 Wed. .	190·6690	4212
26 Mar. (85) . .	1 Sun. .	13	30	0	12 Mar. (71) .	1 Sun. .	66·3524	4213
25 Mar. (85) . .	2 Mon. .	19	42	30	1 Mar. (61) .	6 Fri. .	280·6676	4214
26 Mar. (85) . .	4 Wed. .	1	55	0	20 Mar. (79) .	5 Thur. .	315·3072	4215
26 Mar. (85) . .	5 Thur. .	8	7	30	9 Mar. (68) .	2 Mon. .	190·9905	4216
26 Mar. (85) . .	6 Fri. .	14	20	0	26 Feb. (57) .	6 Fri. .	66·6740	4217
25 Mar. (85) . .	0 Sat. .	20	32	30	16 Mar. (76) .	5 Thur. .	101·3136	4218
26 Mar. (85) . .	2 Mon. .	2	45	0	6 Mar. (65) .	3 Tues. .	315·6288	4219
26 Mar. (85) . .	3 Tues. .	8	57	30	24 Mar. (83) .	1 Sun. .	11·6365	4220

† As a mean tithi Chaitra Sukla 1 was expunged. The civil day corresponding to it, *i.e.*, the first day of the luni-solar year was as given in cols. 19, 20.

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3a	4	5	6	7	8a
4221	1042	1177	526	294-95	1119-20	33 Vikārin	36 Śubhakṛit	...
4222	1043	1178	527	295-96	*1120-21	34 Śārvarin	37 Śōbhana	7 Āśvina
4223	1044	1179	528	296-97	1121-22	35 Plava	38 Krōdhin	...
4224	1045	1180	529	297-98	1122-23	36 Śubhakṛit	39 Viśvāvasu	...
4225	1046	1181	530	298-99	1123-24	37 Śōbhana	40 Parābhava	4 Āshāḍha
4226	1047	1182	531	299-00	*1124-25	38 Krōdhin	41 Plavaṅga	...
4227	1048	1183	532	300-01	1125-26	39 Viśvāvasu	42 Kīlaka	12 Phālguna
4228	1049	1184	533	301-02	1126-27	40 Parābhava	43 Saumya	...
4229	1050	1185	534	302-0[illegible]	1127-28	41 Plavaṅga	44 Sādhāraṇa	...
4230	1051	1186	535	303-04	*1128-29	42 Kīlaka	45 Virōdhakṛit	9 Mārgaśira
4231	1052	1187	536	304-05	1129-30	43 Saumya	46 Paridhāvin	...
4232	1053	1188	537	305-06	1130-31	44 Sādhāraṇa	47 Pramādin	...
4233	1054	1189	538	306-07	1131-32	45 Virōdhakṛit	48 Ānanda	6 Bhādrapada
4234	1055	1190	539	307-08	*1132-33	46 Paridhāvin	49 Rākshasa	...
4235	1056	1191	540	308-09	1133-34	47 Pramādin	50 Anala	...
4236	1057	1192	541	309-10	1134-35	48 Ānanda	51 Piṅgala	2 Vaiśākha
4237	1058	1193	542	310-11	1135-36	49 Rākshasa	52 Kālayukta	...
4238	1059	1194	543	311-12	*1136-37	50 Anala	53 Siddhārthin	11 Māgha
4239	1060	1195	544	312-13	1137-38	51 Piṅgala	54 Raudra	...
4240	1061	1196	545	313-14	1138-39	52 Kālayukta	55 Durmati	...
4241	1062	1197	546	314-15	1139-40	53 Siddhārthin	56 Dundubhi	7 Āśvina
4242	1063	1198	547	315-16	*1140-41	54 Raudra	57 Rudhirōdgārin	...
4243	1064	1199	548	316-17	1141-42	55 Durmati	58 Raktāksha	...
4244	1065	1200	549	317-18	1142-43	56 Dundubhi	59 Krōdhana	4 Āshāḍha
4245	1066	1201	550	318-19	1143-44	57 Rudhirōdgārin	60 Kshaya	...

LXXVI—*Contd.*

1 Ārya Siddhânta, mean system.

COMMENCEMENT OF THE									Kali year
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrânti.			Day and month, A.D.	Week-day.	*a* (here=*t*, the index of the tithi).		
13	14	17			19	20	23		1
		H.	M.	S.					
26 Mar. (85) .	4 Wed.	15	10	0	14 Mar. (73)	6 Fri.	225·9518		4221
25 Mar. (85) .	5 Thur.	21	22	30	2 Mar. (62)	3 Tues.	101·6352		4222
26 Mar. (85) .	0 Sat.	3	35	0	21 Mar. (80)	2 Mon.	136·2748		4223
26 Mar. (85) .	1 Sun.	9	47	30	10 Mar. (69)	6 Fri.	11·9582		4224
26 Mar. (85) .	2 Mon.	16	0	0	28 Feb. (59)	4 Wed.	226·2735		4225
25 Mar. (85) .	3 Tues.	22	12	30	18 Mar. (78)	3 Tues.	260·9131		4226
26 Mar. (85) .	5 Thur.	4	25	0	7 Mar. (66)	0 Sat.	136·5965		4227
26 Mar. (85) .	6 Fri.	10	37	30	26 Mar. (85)	6 Fri.	171·2360		4228
26 Mar. (85) .	0 Sat.	16	50	0	15 Mar. (74)	3 Tues.	46·9195		4229
25 Mar. (85) .	1 Sun.	23	2	30	4 Mar. (64)	1 Sun.	261·2348		4230
26 Mar. (85) .	3 Tues.	5	15	0	23 Mar. (82)	0 Sat.	295·8744		4231
26 Mar. (85) .	4 Wed.	11	27	30	12 Mar. (71)	4 Wed.	171·5578		4232
26 Mar. (85) .	5 Thur.	17	40	0	1 Mar. (60)	1 Sun.	47·2411		4233
25 Mar. (85) .	6 Fri.	23	52	30	19 Mar. (79)	0 Sat.	81·8807		4234
26 Mar. (85) .	1 Sun.	6	5	0	9 Mar. (68)	5 Thur.	296·1960		4235
26 Mar. (85) .	2 Mon.	12	17	30	26 Feb. (57)	2 Mon.	171·8794		4236
26 Mar. (85) .	3 Tues.	18	30	0	17 Mar. (76)	1 Sun.	206·5190		4237
26 Mar. (86) .	5 Thur.	0	42	30	5 Mar. (65)	5 Thur.	82·2024		4238
26 Mar. (85) .	6 Fri.	6	55	0	24 Mar. (83)	4 Wed.	116·8420		4239
26 Mar. (85) .	0 Sat.	13	7	30	14 Mar. (73)	2 Mon.	331·1573		4240
26 Mar. (85) .	1 Sun.	19	20	0	3 Mar. (62)	6 Fri.	206·8407		4241
26 Mar. (86) .	3 Tues.	1	32	30	21 Mar. (81)	5 Thur.	241·4803		4242
26 Mar. (85) .	4 Wed.	7	45	0	10 Mar. (69)	2 Mon	117·1637		4243
26 Mar. (85) .	5 Thur.	13	57	30	28 Feb. (59)	0 Sat	331·4790		4244
26 Mar. (85) .	6 Fri.	20	10	0	18 Mar. (77)	5 Thur.	27·4867		4245

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	Mean Intercalated (adhika) lunar month.
1	2	3	3a	4	5	6	7	7a
4246	1067	1202	551	319-20	*1144-45	58 Raktāksha .	1 Prabhava .	12 Phālguna .
4247	1068	1203	552	320-21	1145-46	59 Krōdhana .	2 Vibhava .	...
4248	1069	1204	553	321-22	1146-47	60 Kshaya .	3 Śukla . .	...
4249	1070	1205	554	322-23	1147-48	1 Prabhava .	4 Pramōda .	9 Mārgaśira .
4250	1071	1206	555	323-24	*1148-49	2 Vibhava .	5 Prajāpati .	...
4251	1072	1207	556	324-25	1149-50	3 Śukla . .	6 Aṅgiras .	...
4252	1073	1208	557	325-26	1150-51	4 Pramōda .	7 Śrīmukha .	5 Śrāvaṇa .
4253	1074	1209	558	326-27	1151-52	5 Prajāpati .	8 Bhāva . .	...
4254	1075	1210	559	327-28	*1152-53	6 Aṅgiras .	9 Yuvan . .	...
4255	1076	1211	560	328-29	1153-54	7 Śrīmukha .	10 Dhātṛi . .	2 Vaiśākha .
4256	1077	1212	561	329-30	1154-55	8 Bhāva . .	11 Īśvara . .	...
4257	1078	1213	562	330-31	1155-56	9 Yuvan . .	12 Bahudhānya .	10 Pausha .
4258	1079	1214	563	331-32	*1156-57	10 Dhātṛi . .	13 Pramāthin .	...
4259	1080	1215	564	332-33	1157-58	11 Iśvara . .	14 Vikrama .	...
4260	1081	1216	565	333-34	1158-59	12 Bahudhānya .	15 Vṛisha . .	7 Āsvina .
4261	1082	1217	566	334-35	1159-60	13 Pramāthin .	16 Chitrabhānu .	...
4262	1083	1218	567	335-36	*1160-61	14 Vikrama .	17 Subhānu* .	...
4263	1084	1219	568	336-37	1161-62	15 Vṛisha . .	19 *Pārthiva* .	3 Jyēshṭha .
4264	1085	1220	569	337-38	1162-63	16 Chitrabhānu .	20 *Vyaya* . .	...
4265	1086	1221	570	338-39	1163-64	17 Subhānu .	21 *Sarvajit* .	12 Phālguna .
4266	1087	1222	571	339-40	*1164-65	18 Tāraṇa . .	22 *Sarvadhārin* .	...
4267	1088	1223	572	340-41	1165-66	19 Pārthiva .	23 Virōdhin .	...
4268	1089	1224	573	341-42	1166-67	20 Vyaya . .	24 Vikṛita . .	8 Kārttika .
4269	1090	1225	574	342-43	1167-68	21 Sarvajit .	25 Khara . .	...
4270	1091	1226	575	343-44	*1168-69	22 Sarvadhārin .	26 Nandana .	...

* 18 Tāraṇa was suppressed in the north.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = t, the index of the tithi).	
13	14	17	19	20	23	1
		H. M. S.				
26 Mar. (86) . .	1 Sun. .	2 22 30	7 Mar. (67) .	3 Tues. .	241·8019	4246
26 Mar. (85) . .	2 Mon. .	8 35 0	26 Mar. (85) .	2 Mon. .	276·4415	4247
26 Mar. (85) . .	3 Tues. .	14 47 30	15 Mar. (74) .	6 Fri. .	152·1249	4248
26 Mar. (85) . .	4 Wed. .	21 0 0	4 Mar. (63) .	3 Tues. .	27·8084	4249
26 Mar. (86) . .	6 Fri. .	3 12 30	22 Mar. (82) .	2 Mon. .	62·4479	4250
26 Mar. (85) . .	0 Sat. .	9 25 0	12 Mar. (71) .	0 Sat. .	276·7631	4251
26 Mar. (85) . .	1 Sun. .	15 37 30	1 Mar. (60) .	4 Wed. .	152·4465	4252
26 Mar. (85) . .	2 Mon. .	21 50 0	20 Mar. (79) .	3 Tues. .	187·0861	4253
26 Mar. (86) . .	4 Wed. .	4 2 30	8 Mar. (68) .	0 Sat. .	62·7695	4254
26 Mar. (85) . .	5 Thur. .	10 15 0	26 Feb. (57) .	5 Thur. .	277·0848	4255
26 Mar. (85) . .	6 Fri. .	16 27 30	17 Mar. (76) .	4 Wed. .	311·7245	4256
26 Mar. (85) . .	0 Sat. .	22 40 0	6 Mar. (65) .	1 Sun. .	187·4078	4257
26 Mar. (86) . .	2 Mon. .	4 52 30	24 Mar. (84) .	0 Sat. .	222·0474	4258
26 Mar. (85) . .	3 Tues. .	11 5 0	13 Mar. (72) .	4 Wed. .	98·1308	4259
26 Mar. (85) . .	4 Wed. .	17 17 30	3 Mar. (62) .	2 Mon. .	312·0461	4260
26 Mar. (85) . .	5 Thur. .	23 30 0	21 Mar. (80) .	0 Sat. .	8·0538	4261
26 Mar. (86) . .	0 Sat. .	5 42 30	10 Mar. (70) .	5 Thur. .	222·3691	4262
26 Mar. (85) . * .	1 Sun. .	11 55 0	27 Feb. (58) .	2 Mon. .	98·4525	4263
26 Mar. (85) . .	2 Mon. .	18 7 30	18 Mar. (77) .	1 Sun. .	132·6822	4264
27 Mar. (86) . .	4 Wed. .	0 20 0	7 Mar. (66) .	5 Thur. .	8·3755	4265
26 Mar. (86) . .	5 Thur. .	6 32 30	25 Mar. (85) .	4 Wed. .	43·0151	4266
26 Mar. (85) . .	6 Fri. .	12 45 0	15 Mar. (74) .	2 Mon. .	257·3504	4267
26 Mar. (85) . .	0 Sat. .	18 57 30	4 Mar. (63) .	6 Fri. .	133·0138	4268
27 Mar. (86) . .	2 Mon. .	1 10 0	23 Mar. (82) .	5 Thur. .	167·6434	4269
26 Mar. (86) . .	3 Tues. .	7 22 30	11 Mar. (71) .	2 Mon. .	43·3368	4270

TABLE

Concurrent Year.								Mean Intercalated (adhika) lunar month.
						Jovian Saṁvatsara.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4271	1092	1227	576	344-45	1169-70	23 Virōdhin .	27 Vijaya . .	5 Śrāvaṇa .
4272	1093	1228	577	345-46	1170-71	24 Vikṛita . .	28 Jaya . .	...
4273	1094	1229	578	346-47	1171-72	25 Khara . .	29 Manmatha .	...
4274	1095	1230	579	347-48	*1172-73	26 Nandana .	30 Durmukha .	2 Vaiśākha .
4275	1096	1231	580	348-49	1173-74	27 Vijaya . .	31 Hēmalamba .	...
4276	1097	1232	581	349-50	1174-75	28 Jaya . .	32 Vilamba .	10 Pausha .
4277	1098	1233	582	350-51	1175-76	29 Manmatha .	33 Vikārin .	...
4278	1099	1234	583	351-52	*1176-77	30 Durmukha .	34 Śārvarin .	...
4279	1100	1235	584	352-53	1177-78	31 Hēmalamba .	35 Plava . .	7 Āśvina .
4280	1101	1236	585	353-54	1178-79	32 Vilamba .	36 Śubhakṛit .	...
4281	1102	1237	586	354-55	1179-80	33 Vikārin .	37 Śōbhana .	...
4282	1103	1238	587	355-56	*1180-81	34 Sārvarin .	38 Krōdhin .	3 Jyēshṭha .
4283	1104	1239	588	356-57	1181-82	35 Plava . .	39 Viśvāvasu .	...
4284	1105	1240	589	357-58	1182-83	36 Śubhakrit .	40 Parābhava .	12 Phālguna .
4285	1106	1241	590	358-59	1183-84	37 Śōbhana .	41 Plavaṅga .	...
4286	1107	1242	591	359-60	*1184-85	38 Krōdhin .	42 Kīlaka . .	...
4287	1108	1243	592	360-61	1185-86	39 Viśvāvasu .	43 Saumya .	8 Kārttika .
4288	1109	1244	593	361-62	1186-87	40 Parābhava .	44 Sādhāraṇa .	...
4289	1110	1245	594	362-63	1187-88	41 Plavaṅga .	45 Virōdhakṛit .	...
4290	1111	1246	595	363-64	*1188-89	42 Kīlaka . .	46 Paridhāvin .	5 Śrāvaṇa .
4291	1112	1247	596	364-65	1189-90	43 Saumya .	47 Pramādin .	...
4292	1113	1248	597	365-66	1190-91	44 Sādhāraṇa .	48 Ānanda . .	...
4293	1114	1249	598	366-67	1191-92	45 Virōdhakṛit .	49 Rākshasa .	1 Chaitra .
4294	1115	1250	599	367-68	*1192-93	46 Paridhāvin .	50 Anala . .	...
4295	1116	1251	600	368-69	1193-94	47 Pramādin .	51 Piṅgala .	10 Pausha .

LXXVI—*Contd.*

1 Ârya Siddhânta, mean system.

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrânti.			Day and month, A.D.	Week-day.	*a* (here=*t*, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
26 Mar. (85)	4 Wed.	13	35	0	1 Mar. (60)	0 Sat.	257·6521	4271
26 Mar. (85)	5 Thur.	19	47	30	20 Mar. (79)	6 Fri.	292·2917	4272
27 Mar. (86)	0 Sat.	2	0	0	9 Mar. (68)	3 Tues.	167·9751	4273
26 Mar. (86)	1 Sun.	8	12	30	26 Feb. (57)	0 Sat.	43·6684	4274
26 Mar. (85)	2 Mon.	14	25	0	16 Mar. (75)	6 Fri.	78·2981	4275
26 Mar. (85)	3 Tues.	20	37	30	6 Mar. (65)	4 Wed.	292·6133	4276
27 Mar. (86)	5 Thur.	2	50	0	25 Mar. (84)	3 Tues.	327·2528	4277
26 Mar. (86)	6 Fri.	9	2	30	13 Mar. (73)	0 Sat.	202·9372	4278
26 Mar. (85)	0 Sat.	15	15	0	2 Mar. (61)	4 Wed.	78·6196	4279
26 Mar. (85)	1 Sun.	21	27	30	21 Mar. (80)	3 Tues.	113·2593	4280
27 Mar. (86)	3 Tues.	3	40	0	11 Mar. (70)	1 Sun.	327·5745	4281
26 Mar. (86)	4 Wed.	9	52	30	28 Feb. (59)	5 Thur.	203·2579	4282
26 Mar. (85)	5 Thur.	16	5	0	18 Mar. (77)	4 Wed.	237·8975	4283
26 Mar. (85)	6 Fri.	22	17	30	7 Mar. (66)	1 Sun.	113·5809	4284
27 Mar. (86)	1 Sun.	4	30	0	26 Mar. (85)	0 Sat.	148·2205	4285
26 Mar. (86)	2 Mon.	10	42	30	14 Mar. (74)	4 Wed.	23·9039	4286
26 Mar. (85)	3 Tues.	16	55	0	4 Mar. (63)	2 Mon.	238·2192	4287
26 Mar. (85)	4 Wed.	23	7	30	23 Mar. (82)	1 Sun.	272·8588	4288
27 Mar. (86)	6 Fri.	5	20	0	12 Mar. (71)	5 Thur.	148·5422	4289
26 Mar. (86)	0 Sat.	11	32	30	29 Feb. (60)	2 Mon.	24·2256	4290
26 Mar. (85)	1 Sun.	17	45	0	19 Mar. (78)	1 Sun.	58·8452	4291
26 Mar. (85)	2 Mon.	23	57	30	9 Mar. (68)	6 Fri.	273·1865	4292
27 Mar. (86)	4 Wed.	6	10	0	26 Feb. (57)	3 Tues.	148·8638	4293
26 Mar. (86)	5 Thur.	12	22	30	16 Mar. (76)	2 Mon.	183·5035	4294
26 Mar. (85)	6 Fri.	18	35	0	5 Mar. (64)	6 Fri.	59·1868	4295

TABLE

CONCURRENT YEAR.								
Kali.	Saka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	Mean Intercalated (adhika) lunar month.
1	2	3	3a	4	5	6	7	8a
4296	1117	1252	601	369-70	1194-95	48 Ānanda	52 Kālayukta	...
4297	1118	1253	602	370-71	1195-96	49 Rākshasa	53 Siddhārthin	...
4298	*1119	1254	603	371-72	*1196-97	50 Anala	54 Raudra	6 Bhādrapada
4299	1120	1255	604	372-73	1197-98	51 Piṅgala	55 Durmati	...
4300	1121	1256	605	373-74	1198-99	52 Kālayukta	56 Dundubhi	...
4301	1122	1257	606	374-75	1199-00	53 Siddhārthin	57 Rudhirōdgārin	3 Jyēshṭha
4302	1123	1258	607	375-76	*1200-01	54 Raudra	58 Raktāksha	...
4303	1124	1259	608	376-77	1201-02	55 Durmati	59 Krōdhana	11 Māgha
4304	1125	1260	609	377-78	1202-03	56 Dundubhi	60 Kshaya	...
4305	1126	1261	610	378-79	1203-04	57 Rudhirōdgārin	1 Prabhava	...
4306	1127	1262	611	379-80	*1204-05	58 Raktāksha	2 Vibhava	8 Kārttika
4307	1128	1263	612	380-81	1205-06	59 Krōdhana	3 Śukla	...
4308	1129	1264	613	381-82	1206-07	60 Kshaya	4 Pramōda	...
4309	1130	1265	614	382-83	1207-08	1 Prabhava	5 Prajāpati	5 Śrāvaṇa
4310	1131	1266	615	383-84	*1208-09	2 Vibhava	6 Aṅgiras	...
4311	1132	1267	616	384-85	1209-10	3 Śukla	7 Śrīmukha	...
4312	1133	1268	617	385-86	1210-11	4 Pramōda	8 Bhāva	1 Chaitra
4313	1134	1269	618	386-87	1211-12	5 Prajāpati	9 Yuvan	...
4314	1135	1270	619	387-88	*1212-13	6 Aṅgiras	10 Dhātṛi	10 Pausha
4315	1136	1271	620	388-89	1213-14	7 Śrīmukha	11 Īśvara	...
4316	1137	1272	621	389-90	1214-15	3 Bhāva	12 Bahudhānya	...
4317	1138	1273	622	390-91	1215-16	9 Yuvan	13 Pramāthin	6 Bhādrapada
4318	1139	1274	623	391-92	*1216-17	10 Dhātṛi	14 Vikrama	...
4319	1140	1275	624	392-93	1217-18	11 Īśvara	15 Vṛisha	...
4320	1141	1276	625	393-94	1218-19	12 Bahudhānya	16 Chitrabhānu	3 Jyēshṭha

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	a (here=t, the index of the tithi).	
13	14	17	19	20	23	1
		H. M. S.				
27 Mar. (86) . .	1 Sun. .	0 47 30	24 Mar. (83) .	5 Thur. .	93·8264	4296
27 Mar. (86) . .	2 Mon. .	7 0 0	14 Mar. (73) .	3 Tues. .	308·1417	4297
26 Mar. (86) . .	3 Tues. .	13 12 30	2 Mar. (62) .	0 Sat. .	183·8251	4298
26 Mar. (85) . .	4 Wed. .	19 25 0	21 Mar. (80) .	6 Fri. .	218·4647	4299
27 Mar. (86) . .	6 Fri. .	1 37 30	10 Mar. (69) .	3 Tues. .	94·1481	4300
27 Mar. (86) . .	0 Sat. .	7 50 0	28 Feb. (59) .	1 Sun. .	308·4634	4301
26 Mar. (86) . .	1 Sun. .	14 2 30	17 Mar. (77) .	6 Fri. .	4·4711	4302
26 Mar. (85) . .	2 Mon. .	20 15 0	7 Mar. (66) .	4 Wed. .	218·7864	4303
27 Mar. (86) . .	4 Wed. .	2 27 30	26 Mar. (85) .	3 Tues. .	253·4359	4304
27 Mar. (86) . .	5 Thur. .	8 40 0	15 Mar. (74) .	0 Sat. .	129·1004	4305
26 Mar. (86) . .	6 Fri. .	14 52 30	3 Mar. (63) .	4 Wed. .	4·7927	4306
26 Mar. (85) . .	0 Sat. .	21 5 0	22 Mar. (81) .	3 Tues. .	39·4324	4307
27 Mar. (86) . .	2 Mon. .	3 17 30	12 Mar. (71) .	1 Sun. .	253·7477	4308
27 Mar. (86) . .	3 Tues. .	9 30 0	1 Mar. (60) .	5 Thur. .	129·4311	4309
26 Mar. (86) . .	4 Wed. .	15 42 30	19 Mar. (79) .	4 Wed. .	164·0707	4310
26 Mar. (85) . .	5 Thur. .	21 55 0	8 Mar. (67) .	1 Sun. .	39·7540	4311
27 Mar. (86) . .	0 Sat. .	4 7 30	26 Feb. (57) .	6 Fri. .	254·0603	4312
27 Mar. (86) . .	1 Sun. .	10 20 0	17 Mar. (76) .	5 Thur. .	288·7089	4313
26 Mar. (86) . .	2 Mon. .	16 32 30	5 Mar. (65) .	2 Mon. .	164·3923	4314
26 Mar. (85) . .	3 Tues. .	22 45 0	24 Mar. (83) .	1 Sun. .	199·0319	4315
27 Mar. (86) . .	5 Thur. .	4 57 30	13 Mar. (72) .	5 Thur. .	74·7152	4316
27 Mar. (86) . .	6 Fri. .	11 10 0	3 Mar. (62) .	3 Tues. .	289·0306	4317
26 Mar. (86) . .	0 Sat. .	17 22 30	21 Mar. (81) .	2 Mon. .	323·6702	4318
26 Mar. (85) . .	1 Sun. .	23 35 0	10 Mar. (69) .	6 Fri. .	199·3535	4319
27 Mar. (86) . .	3 Tues. .	5 47 30	27 Feb. (58) .	3 Tues. .	75·0369	4320

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4321	1142	1277	626	394-95	1219-20	13 Pramāthin	17 Subhānu	...
4322	1143	1278	627	395-96	*1220-21	14 Vikrama	18 Tāraṇa	11 Māgha
4323	1144	1279	628	396-97	1221-22	15 Vṛisha	19 Pārthiva	...
4324	1145	1280	629	297-98	1222-23	16 Chitrabhānu	20 Vyaya	...
4325	1146	1281	630	398-99	1223-24	17 Subhānu	21 Sarvajit	8 Kārttika
4326	1147	1282	631	399-00	*1224-25	18 Tāraṇa	22 Sarvadhārin	...
4327	1148	1283	632	400-01	1225-26	19 Pārthiva	23 Virōdhin	...
4328	1149	1284	633	401-02	1226-27	20 Vyaya	24 Vikṛita	4 Āshāḍha
4329	1150	1285	634	402-03	1227-28	21 Sarvajit	25 Khara	...
4330	1151	1286	635	403-04	*1228-29	22 Sarvadhārin	26 Nandana	...
4331	1152	1287	636	404-05	1229-30	23 Virōdhin	27 Vijaya	1 Chaitra
4332	1153	1288	637	405-06	1230-31	24 Vikṛita	28 Jaya	...
4333	1154	1289	638	406-07	1231-32	25 Khara	29 Manmatha	9 Mārgaśira
4334	1155	1290	639	407-08	*1232-33	26 Nandana	30 Durmukha	...
4335	1156	1291	640	408-09	1233-34	27 Vijaya	31 Hēmalamba	...
4336	1157	1292	641	409-10	1234-35	28 Jaya	32 Vilamba	6 Bhādrapada
4337	1158	1293	642	410-11	1235-36	29 Manmatha	33 Vikārin	...
4338	1159	1294	643	411-12	*1236-37	30 Durmukha	34 Śārvarin	...
4339	1160	1295	644	412-13	1237-38	31 Hēmalamba	35 Plava	2 Vaiśākha
4340	1161	1296	645	413-14	1238-39	32 Vilamba	36 Śubhakṛit	...
4341	1162	1297	646	414-15	1239-40	33 Vikārin	37 Śōbhana	11 Māgha
4342	1163	1298	647	415-16	*1240-41	34 Śārvarin	38 Krōdhin	...
4343	1164	1299	648	416-17	1241-42	35 Plava	39 Viśvāvasu	...
4344	1165	1300	649	417-18	1242-43	36 Śubhakṛit	40 Parābhava	7 Āśvina
4345	1166	1301	650	418-19	1243-44	37 Śōbhana	41 Plavanga	...

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti	Day and month, A.D.	Week-day.	a (here=t, the index of the tithi).	
13	14	17	19	20	23	1
		H. M. S.				
27 Mar. (86)	4 Wed.	12 0 0	18 Mar. (77)	2 Mon.	109·6765	4321
26 Mar. (86)	5 Thur.	18 12 30	7 Mar. (67)	0 Sat.	323·9918	4322
27 Mar. (86)	0 Sat.	0 25 0	25 Mar. (84)	5 Thur.	19·9995	4323
27 Mar. (86)	1 Sun.	6 37 30	15 Mar. (74)	3 Tues.	234·3148	4324
27 Mar. (86)	2 Mon.	12 50 0	4 Mar. (63)	0 Sat.	109·9982	4325
26 Mar. (86)	3 Tues.	19 2 30	22 Mar. (82)	6 Fri.	144·6378	4326
27 Mar. (86)	5 Thur.	1 15 0	11 Mar. (70)	3 Tues.	20·3212	4327
27 Mar. (86)	6 Fri.	7 27 30	1 Mar. (60)	1 Sun.	234·6365	4328
27 Mar. (86)	0 Sat.	13 40 0	20 Mar. (79)	0 Sat.	269·2761	4329
26 Mar. (86)	1 Sun.	19 52 30	8 Mar. (68)	4 Wed.	144·9594	4330
27 Mar. (86)	3 Tues.	2 5 0	25 Feb. (56)	1 Sun.	20·6428	4331
27 Mar. (86)	4 Wed.	8 17 30	16 Mar. (75)	0 Sat.	55·2824	4332
27 Mar. (86)	5 Thur.	14 30 0	6 Mar. (65)	5 Thur.	269·5977	4333
26 Mar. (86)	6 Fri.	20 42 30	24 Mar. (84)	4 Wed.	304·2373	4334
27 Mar. (86)	1 Sun.	2 55 0	13 Mar. (72)	1 Sun.	179·9207	4335
27 Mar. (86)	2 Mon.	9 7 30	2 Mar. (61)	5 Thur.	55·6041	4336
27 Mar. (86)	3 Tues.	15 20 0	21 Mar. (80)	4 Wed.	90·2437	4337
26 Mar. (86)	4 Wed.	21 32 30	10 Mar. (70)	2 Mon.	304·5590	4338
27 Mar. (86)	6 Fri.	3 45 0	27 Feb. (58)	6 Fri.	180·2424	4339
27 Mar. (86)	0 Sat.	9 57 30	18 Mar. (77)	5 Thur.	214·8820	4340
27 Mar. (86)	1 Sun.	16 10 0	7 Mar. (66)	2 Mon.	90·5654	4341
26 Mar. (86)	2 Mon.	22 22 30	25 Mar. (85)	1 Sun.	125·2049	4342
27 Mar. (86)	4 Wed.	4 35 0	14 Mar. (73)	5 Thur.	0·8884	4343
27 Mar. (86)	5 Thur.	10 47 30	4 Mar. (63)	3 Tues.	215·2037	4344
27 Mar. (86)	6 Fri.	17 0 0	23 Mar. (82)	2 Mon.	249·8433	4345

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
						Jovian Saṁvatsara.		
Kali.	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4346	1167	1302	651	419-20	*1244-45	38 Krôdhin	42 Kîlaka	...
4347	1168	1303	652	420-21	1245-46	39 Viśvâvasu	43 Saumya†	4 Âshâḍha
4348	1169	1304	653	421-22	1246-47	40 Parâbhava	45 *Virôdhakṛit*	...
4349	1170	1305	654	422-23	1247-48	41 Plavaṅga	46 *Paridhâvin*	...
4350	1171	1306	655	423-24	*1248-49	42 Kîlaka	47 *Pramâdin*	1 Chaitra
4351	1172	1307	656	424-25	1249-50	43 Saumya	48 *Ânanda*	...
4352	1173	1308	657	425-26	1250-51	44 Sâdhâraṇa	49 *Râkshasa*	9 Mârgaśira
4353	1174	1309	658	426-27	1251-52	45 Virôdhakṛit	50 Anala	...
4354	1175	1310	659	427-28	*1252-53	46 Paridhâvin	51 Piṅgala	...
4355	1176	1311	660	428-29	1253-54	47 Pramâdin	52 Kâlayukta	6 Bhâdrapada
4356	1177	1312	661	429-30	1254-55	48 Ânanda	53 Siddhârthin	...
4357	1178	1313	662	430-31	1255-56	49 Râkshasa	54 Raudra	...
4358	1179	1314	663	431-32	*1256-57	50 Anala	55 Durmati	2 Vaiśâkha
4359	1180	1315	664	432-33	1257-58	51 Piṅgala	56 Dundubhi	...
4360	1181	1316	665	433-34	1258-59	52 Kâlayukta	57 Rudhirôdgârin	11 Mâgha
4361	1182	1317	666	434-35	1259-60	53 Siddhârthin	58 Raktâksha	...
4362	1183	1318	667	435-36	*1260-61	54 Raudra	59 Krôdhana	...
4363	1184	1319	668	436-37	1261-62	55 Durmati	60 Kshaya	7 Âśvina
4364	1185	1320	669	437-38	1262-63	56 Dundubhi	1 Prabhava	...
4365	1186	1321	670	438-39	1263-64	57 Rudhirôdgârin	2 Vibhava	...
4366	1187	1322	671	439-40	*1264-65	58 Raktâksha	3 Śukla	4 Âshâḍha
4367	1188	1323	672	440-41	1265-66	59 Krôdhana	4 Pramôda	...
4368	1189	1324	673	441-42	1266-67	60 Kshaya	5 Prajâpati	12 Phâlguna
4369	1190	1325	674	442-43	1267-68	1 Prabhava	6 Aṅgiras	...
4370	1191	1326	675	443-44	*1268-69	2 Vibhava	7 Śrîmukha	...

† 44, Sâdhâraṇa, was suppressed in the north by the mean system, but 45 Virôdhakṛit by the true system. By the latter system the year A.D. 1246-47 was called in the north, "Sâdhâraṇa."

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	a (here=t, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
26 Mar. (86) . .	0 Sat. .	23	12	30	11 Mar. (71) .	6 Fri. .	125·5266	4346
27 Mar. (86) . .	2 Mon. .	5	25	0	28 Feb. (59) .	3 Tues. .	1·2100	4347
27 Mar. (86) . .	3 Tues. .	11	37	30	19 Mar. (78) .	2 Mon. .	35·8196	4348
27 Mar. (86) . .	4 Wed. .	17	50	0	9 Mar. (68) .	0 Sat. .	250·1649	4349
27 Mar. (87) . .	6 Fri. .	0	2	30	26 Feb. (57) .	4 Wed. .	125·8482	4350
27 Mar. (86) . .	0 Sat. .	6	15	0	16 Mar. (75) .	3 Tues. .	160·4878	4351
27 Mar. (86) . .	1 Sun. .	12	27	30	5 Mar. (64) .	0 Sat. .	36·1712	4352
27 Mar. (86) . .	2 Mon. .	18	40	0	24 Mar. (83) .	6 Fri. .	70·8109	4353
27 Mar. (87) . .	4 Wed. .	0	52	30	13 Mar. (73) .	4 Wed. .	285·1262	4354
27 Mar. (86) . .	5 Thur. .	7	5	0	2 Mar. (61) .	1 Sun. .	160·8095	4355
27 Mar. (86) . .	6 Fri. .	13	17	30	21 Mar. (80) .	0 Sat. .	195·4491	4356
27 Mar. (86) . .	0 Sat. .	19	30	0	10 Mar. (69) .	4 Wed. .	71·1325	4357
27 Mar. (87) . .	2 Mon. .	1	42	30	28 Feb. (59) .	2 Mon. .	285·4478	4358
27 Mar. (86) . .	3 Tues. .	7	55	0	18 Mar. (77) .	1 Sun. .	320·0874	4359
27 Mar. (86) . .	4 Wed. .	14	7	30	7 Mar. (66) .	5 Thur. .	195·7708	4360
27 Mar. (86) . .	5 Thur. .	20	20	0	26 Mar. (85) .	4 Wed. .	230·4104	4361
27 Mar. (87) . .	0 Sat. .	2	32	30	14 Mar. (74) .	1 Sun. .	106·0938	4362
27 Mar. (86) . .	1 Sun. .	8	45	0	4 Mar. (63) .	6 Fri. .	320·4091	4363
27 Mar. (86) . .	2 Mon. .	14	57	30	22 Mar. (81) .	4 Wed. .	16·4168	4364
27 Mar. (86) . .	3 Tues. .	21	10	0	12 Mar. (71) .	2 Mon. .	230·7321	4365
27 Mar. (87) . .	5 Thur. .	3	22	30	29 Feb. (60) .	6 Fri. .	106·4155	4366
27 Mar. (86) . .	6 Fri. .	9	35	0	19 Mar. (78) .	5 Thur. .	141·0551	4367
27 Mar. (86) . .	0 Sat. .	15	47	30	8 Mar. (67) .	2 Mon. .	16·7384	4368
27 Mar. (86) . .	1 Sun. .	22	0	0	27 Mar. (86) .	1 Sun. .	51·3780	4369
27 Mar. (87) . .	3 Tues. .	4	12	30	16 Mar. (76) .	6 Fri. .	265·6934	4370

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	
1	2	3	3a	4	5	6	7	8a
4371	1192	1327	676	444-45	1269-70	3 Śukla . .	8 Bhâva . .	9 Mârgaśira .
4372	1193	1328	677	445-46	1270-71	4 Pramôda .	9 Yuvan . .	...
4373	1194	1329	678	446-47	1271-72	5 Prajâpati .	10 Dhâtṛi . .	...
4374	1195	1330	679	447-48	*1272-73	6 Aṅgiras .	11 Îśvara . .	5 Śrâvaṇa .
4375	1196	1331	680	448-49	1273-74	7 Śrîmukha .	12 Bahudhânya .	...
4376	1197	1332	681	449-50	1274-75	8 Bhâva . .	13 Pramâthin .	...
4377	1198	1333	682	450-51	1275-76	9 Yuvan . .	14 Vikrama .	2 Vaiśâkha .
4378	1199	1334	683	451-52	*1276-77	10 Dhâtṛi . .	15 Vṛisha . .	...
4379	1200	1335	684	452-53	1277-78	11 Îśvara . .	16 Chitrabhânu .	10 Pausha .
4380	1201	1336	685	453-54	1278-79	12 Bahudhânya .	17 Subhânu .	...
4381	1202	1337	686	454-55	1279-80	13 Pramâthin .	18 Târaṇa . .	...
4382	1203	1338	687	455-56	*1280-81	14 Vikrama .	19 Pârthiva .	7 Âśvina .
4383	1204	1339	688	456-57	1281-82	15 Vṛisha . .	20 Vyaya . .	...
4384	1205	1340	689	457-58	1282-83	16 Chitrabhânu .	21 Sarvajit .	...
4385	1206	1341	690	458-59	1283-84	17 Subhânu .	22 Sarvadhârin .	4 Âshâḍha .
4386	1207	1342	691	459-60	*1284-85	18 Târaṇa . .	23 Virôdhin .	...
4387	1208	1343	692	460-61	1285-86	19 Pârthiva .	24 Vikṛita . .	12 Phâlguna .
4388	1209	1344	693	461-62	1286-87	20 Vyaya . .	25 Khara . .	...
4389	1210	1345	694	462-63	1287-88	21 Sarvajit .	26 Nandana .	...
4390	1211	1346	695	463-64	*1288-89	22 Sarvadhârin .	27 Vijaya . .	9 Mârgaśira .
4391	1212	1347	696	464-65	1289-90	23 Virôdhin .	28 Jaya . .	...
4392	1213	1348	697	465-66	1290-91	24 Vikṛita . .	29 Manmatha .	...
4393	1214	1349	698	466-67	1291-92	25 Khara . .	30 Durmukha .	5 Śrâvaṇa .
4394	1215	1350	699	467-68	*1292-93	26 Nandana .	31 Hêmalamba .	...
4395	1216	1351	700	468-69	1293-94	27 Vijaya . .	32 Vilamba .	...

LXXVI—*Contd.*

1 Arya Siddhānta, mean system.

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here=*t*, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
27 Mar. (86) .	4 Wed.	10	25	0	5 Mar. (64)	3 Tues.	141·3767	4371
27 Mar. (86) .	5 Thur.	16	37	30	24 Mar. (83)	2 Mon.	176·0164	4372
27 Mar. (86) .	6 Fri.	22	50	0	13 Mar. (72)	6 Fri.	51·6998	4373
27 Mar. (87) .	1 Sun.	5	2	30	2 Mar. (62)	4 Wed.	266·0150	4374
27 Mar. (86) .	2 Mon.	11	15	0	21 Mar. (80)	3 Tues.	300·6546	4375
27 Mar. (86) .	3 Tues.	17	27	30	10 Mar. (69)	0 Sat.	176·3380	4376
27 Mar. (86) .	4 Wed.	23	40	0	27 Feb. (58)	4 Wed.	52·0213	4377
27 Mar. (87) .	6 Fri.	5	52	30	17 Mar. (77)	3 Tues.	86·6609	4378
27 Mar. (86) .	0 Sat.	12	5	0	7 Mar. (66)	1 Sun.	300·9762	4379
27 Mar. (86) .	1 Sun.	18	17	30	25 Mar. (84)	6 Fri.	9996·9840*	4380
28 Mar. (87) .	3 Tues.	0	30	0	15 Mar. (74)	4 Wed.	211·2992	4381
27 Mar. (87) .	4 Wed.	6	42	30	3 Mar. (63)	1 Sun.	86·9826	4382
27 Mar. (86) .	5 Thur.	12	55	0	22 Mar. (81)	0 Sat.	121·6222	4383
27 Mar. (86) .	6 Fri.	19	7	30	11 Mar. (70)	4 Wed.	9997·3056*	4384
28 Mar. (87) .	1 Sun.	1	20	0	1 Mar. (60)	2 Mon.	211·6209	4385
27 Mar. (87) .	2 Mon.	7	32	30	19 Mar. (79)	1 Sun.	246·2605	4386
27 Mar. (86) .	3 Tues.	13	45	0	8 Mar. (67)	5 Thur.	121·9439	4387
27 Mar. (86) .	4 Wed.	19	57	30	27 Mar. (86)	4 Wed.	156·5834	4388
28 Mar. (87) .	6 Fri.	2	10	0	16 Mar. (75)	1 Sun.	32·2669	4389
27 Mar. (87) .	0 Sat.	8	22	30	5 Mar. (65)	6 Fri.	246·5821	4390
27 Mar. (86) .	1 Sun.	14	35	0	24 Mar. (83)	5 Thur.	281·2218	4391
27 Mar. (86) .	2 Mon.	20	47	30	13 Mar. (72)	2 Mon.	156·9051	4392
28 Mar. (87) .	4 Wed.	3	0	0	2 Mar. (61)	6 Fri.	32·5885	4393
27 Mar. (87) .	5 Thur.	9	12	30	20 Mar. (80)	5 Thur.	67·2281	4394
27 Mar. (86) .	6 Fri.	15	25	0	10 Mar. (69)	3 Tues.	281·5434	4395

* As a mean tithi Chaitra Śukla 1 was expunged. The civil day corresponding to it, *i.e.*, the first day of the luni-solar year was as given in cols. 19, 20.

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	Jovian saṁvatsara. Southern system.	Jovian saṁvatsara. Northern system.	
1	2	3	3a	4	5	6	7	8a
4396	1217	1352	701	469-70	1294-95	28 Jaya	33 Vikârin	2 Vaiśâkha
4397	1218	1353	702	470-71	1295-96	29 Manmatha	34 Śârvarin	...
4398	1219	1354	703	471-72	*1296-97	30 Durmukha	35 Plava	10 Pausha
4399	1220	1355	704	472-73	1297-98	31 Hêmalamba	36 Śubhakṛit	...
4400	1221	1356	705	473-74	1298-99	32 Vilamba	37 Śôbhana	...
4401	1222	1357	706	474-75	1299-00	33 Vikârin	38 Krôdhin	7 Âśvina
4402	1223	1358	707	475-76	*1300-01	34 Śârvarin	39 Viśvâvasu	...
4403	1224	1359	708	476-77	1301-02	35 Plava	40 Parâbhava	...
4404	1225	1360	709	477-78	1302-03	36 Śubhakṛit	41 Plavaṅga	3 Jyêshṭha
4405	1226	1361	710	478-79	1303-04	37 Śôbhana	42 Kîlaka	...
4406	1227	1362	711	479-80	*1304-05	38 Krôdhin	43 Saumya	12 Phâlguna
4407	1228	1363	712	480-81	1305-06	39 Viśvâvasu	44 Sâdhâraṇa	...
4408	1229	1364	713	481-82	1306-07	40 Parâbhava	45 Virôdhakṛit	...
4409	1230	1365	714	482-83	1307-08	41 Plavaṅga	46 Paridhâvin	8 Kârttika
4410	1231	1366	715	483-84	*1308-09	42 Kîlaka	47 Pramâdin	...
4411	1232	1367	716	484-85	1309-10	43 Saumya	48 Ânanda	...
4412	1233	1368	717	485-86	1310-11	44 Sâdhâraṇa	49 Râkshasa	5 Śrâvaṇa
4413	1234	1369	718	486-87	1311-12	45 Virôdhakṛit	50 Anala	...
4414	1235	1370	719	487-88	*1312-13	46 Paridhâvin	51 Piṅgala	...
4415	1236	1371	720	488-89	1313-14	47 Pramâdin	52 Kâlayukta	1 Chaitra
4416	1237	1372	721	489-90	1314-15	48 Ânanda	53 Siddhârthin	...
4417	1238	1373	722	490-91	1315-16	49 Râkshasa	54 Raudra	10 Pausha
4418	1239	1374	723	491-92	*1316-17	50 Anala	55 Durmati	...
4419	1240	1375	724	492-93	1317-18	51 Piṅgala	56 Dundubhi	...
4420	1241	1376	725	493-94	1318-19	52 Kâlayukta	57 Rudhirôdgârin	7 Âśvina

LXXVI—*Contd.*

1 Ârya Siddhânta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).			
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrânti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).	
13	14	17	19	20	23	1
		H. M. S.				
27 Mar. (86) .	0 Sat. .	21 37 40	27 Feb. (58) .	0 Sat. .	157·2268	4396
28 Mar. (87) .	2 Mon. .	3 50 0	18 Mar. (77) .	6 Fri. .	191·8664	4397
27 Mar. (87) .	3 Tues. .	10 2 30	6 Mar. (66) .	3 Tues. .	67·5498	4398
27 Mar. (86) .	4 Wed. .	16 15 0	25 Mar. (84) .	2 Mon. .	102·1894	4399
27 Mar. (86) .	5 Thur. .	22 27 30	15 Mar. (74) .	0 Sat. .	316·5047	4400
28 Mar. (87) .	0 Sat. .	4 40 0	4 Mar. (63) .	4 Wed. .	192·1881	4401
27 Mar. (87) .	1 Sun. .	10 52 30	22 Mar. (82) .	3 Tues. .	226·8277	4402
27 Mar. (86) .	2 Mon. .	17 5 0	11 Mar. (70) .	0 Sat. .	102·5111	4403
27 Mar. (86) .	3 Tues. .	23 17 30	1 Mar. (60) .	5 Thur. .	316·8264	4404
28 Mar. (87) .	5 Thur. .	5 30 0	19 Mar. (78) .	3 Tues. .	12·8341	4405
27 Mar. (87) .	6 Fri. .	11 42 30	8 Mar. (68) .	1 Sun. .	227·1494	4406
27 Mar. (86) .	0 Sat. .	17 55 0	27 Mar. (86) .	0 Sat. .	261·7889	4407
28 Mar. (87) .	2 Mon. .	0 7 30	16 Mar. (75) .	4 Wed. .	137·4728	4408
28 Mar. (87) .	3 Tues. .	6 20 0	5 Mar. (64) .	1 Sun. .	13·1558	4409
27 Mar. (87) .	4 Wed. .	12 32 30	23 Mar. (83) .	0 Sat. .	47·7954	4410
27 Mar. (86) .	5 Thur. .	18 45 0	13 Mar. (72) .	5 Thur. .	262·1106	4411
28 Mar. (87) .	0 Sat. .	0 57 30	2 Mar. (61) .	2 Mon. .	137·7940	4412
28 Mar. (87) .	1 Sun. .	7 10 0	21 Mar. (80) .	1 Sun. .	172·4337	4413
27 Mar. (87) .	2 Mon. .	13 22 30	9 Mar. (69) .	5 Thur. .	48·1170	4414
27 Mar. (86) .	3 Tues. .	19 35 0	27 Feb. (58) .	3 Tues. .	262·4322	4415
28 Mar. (87) .	5 Thur. .	1 47 30	18 Mar. (77) .	2 Mon. .	297·0719	4416
28 Mar. (87) .	6 Fri. .	8 0 0	7 Mar. (66) .	6 Fri. .	172·7553	4417
27 Mar. (87) .	0 Sat. .	14 12 30	25 Mar. (85) .	5 Thur. .	207·3949	4418
27 Mar. (86) .	1 Sun. .	20 25 0	14 Mar. (73) .	2 Mon. .	83·0[illegible]	4419
28 Mar. (87) .	3 Tues. .	2 37 30	4 Mar. (63) .	0 Sat. .	297·3935	4420

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3a	4	5	6	7	8a
4421	1242	1377	726	494-95	1319-20	53 Siddhārthin	58 Raktāksha	...
4422	1243	1378	727	495-96	*1320-21	54 Raudra	59 Krōdhana	...
4423	1244	1379	728	496-97	1321-22	55 Durmati	60 Kshaya	3 Jyēshṭha
4424	1245	1380	729	497-98	1322-23	56 Dundubhi	1 Prabhava	...
4425	1246	1381	730	498-99	1323-24	57 Rudhirōdgārin	2 Vibhava	12 Phālguna
4426	1247	1382	731	499-00	*1324-25	58 Raktāksha	3 Śukla	...
4427	1248	1383	732	500-01	1325-26	59 Krōdhana	4 Pramōda	...
4428	1249	1384	733	501-02	1326-27	60 Kshaya	5 Prajāpati	8 Kārttika
4429	1250	1385	734	502-03	1327-28	1 Prabhava	6 Aṅgiras	...
4430	1251	1386	735	503-04	*1328-29	2 Vibhava	7 Śrīmukha	...
4431	1252	1387	736	504-05	1329-30	3 Śukla	8 Bhāva	5 Śrāvaṇa
4432	1253	1388	737	505-06	1330-31	4 Pramōda	9 Yuvan†	...
4433	1254	1389	738	506-07	1331-32	5 Prajāpati	11 *Īśvara*	...
4434	1255	1390	739	507-08	*1332-33	6 Aṅgiras	12 *Bahudhānya*	1 Chaitra
4435	1256	1391	740	508-09	1333-34	7 Śrīmukha	13 *Pramāthin*	...
4436	1257	1392	741	509-10	1334-35	8 Bhāva	14 *Vikrama*	10 Pausha
4437	1258	1393	742	510-11	1335-36	9 Yuvan	15 *Vṛisha*	...
4438	1259	1394	743	511-12	*1336-37	10 Dhātṛi	16 Chitrabhānu	...
4439	1260	1395	744	512-13	1337-38	11 Īśvara	17 Subhānu	6 Bhādrapada
4440	1261	1396	745	513-14	1338-39	12 Bahudhānya	18 Tāraṇa	...
4441	1262	1397	746	514-15	1339-40	13 Pramāthin	19 Pārthiva	...
4442	1263	1398	747	515-16	*1340-41	'4 Vikrama	20 Vyaya	3 Jyēshṭha
4443	1264	1399	748	516-17	1341-42	15 Vṛisha	21 Sarvajit	...
4444	1265	1400	749	517-18	1342-43	16 Chitrabhānu	22 Sarvadhārin	11 Māgha
4445	1266	1401	750	518-19	1343-44	17 Subhānu	23 Virōdhin	...

† 10 Dhātṛi was suppressed in the north by the mean system, but 11 Īśvara by the true system. The year A.D. 1331-32 was by the latter system called "10 Dhātṛi" in the north.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	a (here=t, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
28 Mar. (87) . .	4 Wed. .	8	50	0	23 Mar. (82) .	6 Fri. .	332·0331	4421
27 Mar. (87) . .	5 Thur. .	15	2	30	11 Mar. (71) .	3 Tues. .	207·7165	4422
27 Mar. (86) . .	6 Fri. .	21	15	0	28 Feb. (59) .	0 Sat. .	83·3999	4423
28 Mar. (87) . .	1 Sun. .	3	27	30	19 Mar. (78) .	6 Fri. .	118·0395	4424
28 Mar. (87) .	2 Mon. .	9	40	0	9 Mar. (68) .	4 Wed. .	332·3547	4425
27 Mar. (87) . .	3 Tues. .	15	52	30	26 Mar. (86) .	2 Mon. .	28·3624	4426
27 Mar. (86) . .	4 Wed. .	22	5	0	16 Mar. (75) .	0 Sat. .	242·6778	4427
28 Mar. (87) . .	6 Fri. .	4	17	30	5 Mar. (64) .	4 Wed. .	118·3612	4428
28 Mar. (87) . .	0 Sat. .	10	30	0	24 Mar. (83) .	3 Tues. .	153·0008	4429
27 Mar. (87) . .	1 Sun. .	16	42	30	12 Mar. (72) .	0 Sat. .	28·7841	4430
27 Mar. (86) . .	2 Mon. .	22	55	0	2 Mar. (61) .	5 Thur. .	242·9995	4431
28 Mar. (87) . .	4 Wed. .	5	7	30	21 Mar. (80) .	4 Wed. .	277·6391	4432
28 Mar. (87) . .	5 Thur. .	11	20	0	10 Mar. (69) .	1 Sun. .	153·3224	4433
27 Mar. (87) . .	6 Fri. .	17	32	30	27 Feb. (58) .	5 Thur. .	29·0058	4434
27 Mar. (86) . .	0 Sat. .	23	45	0	17 Mar. (76) .	4 Wed. .	63·6455	4435
28 Mar. (87) . .	2 Mon. .	5	57	30	7 Mar. (66) .	2 Mon. .	277·9607	4436
28 Mar. (87) . .	3 Tues. .	12	10	0	25 Mar. (85) .	1 Sun. .	312·6003	4437
27 Mar. (87) .	4 Wed. .	18	22	30	14 Mar. (74) .	5 Thur. .	188·2837	4438
28 Mar. (87) . .	6 Fri. .	0	35	0	3 Mar. (62) .	2 Mon. .	63·9689	4439
28 Mar. (87) . .	0 Sat. .	6	47	30	22 Mar. (81) .	1 Sun. .	98·6067	4440
28 Mar. (87) . .	1 Sun. .	13	0	0	12 Mar. (71) .	6 Fri. .	312·9231	4441
27 Mar. (87) . .	2 Mon. .	19	12	30	29 Feb. (60) .	3 Tues. .	188·6054	4442
28 Mar. (87) . .	4 Wed. .	1	25	0	19 Mar. (78) .	2 Mon. .	223·2350	4443
28 Mar. (87) . .	5 Thur. .	7	37	30	8 Mar. (67) .	6 Fri. .	98·9284	4444
28 Mar. (87) . .	6 Fri. .	13	50	0	27 Mar. (86) .	5 Thur. .	133·5679	4445

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4446	1267	1402	751	519-20	*1344-45	18 Tāraṇa . .	24 Vikṛita . .	...
4447	1268	1403	752	520-21	1345-46	19 Pārthiva .	25 Khara . .	8 Kārttika .
4448	1269	1404	753	521-22	1346-47	20 Vyaya . .	26 Nandana .	...
4449	1270	1405	754	522-23	1347-48	21 Sarvajit .	27 Vijaya . .	...
4450	1271	1406	755	523-24	*1348-49	22 Sarvadhārin .	28 Jaya . .	4 Āshāḍha .
4451	1272	1407	756	524-25	1349-50	23 Virōdhin .	29 Manmatha .	...
4452	1273	1408	757	525-26	1350-51	24 Vikṛita . .	30 Durmukha .	...
4453	1274	1409	758	526-27	1351-52	25 Khara . .	31 Hēmalamba .	1 Chaitra .
4454	1275	1410	759	527-28	*1352-53	26 Nandana .	32 Vilamba .	...
4455	1276	1411	760	528-29	1353-54	27 Vijaya . .	33 Vikārin .	9 Mārgaśira .
4456	1277	1412	761	529-30	1354-55	28 Jaya . .	34 Śārvarin .	...
4457	1278	1413	762	530-31	1355-56	29 Manmatha .	35 Plava . .	...
4458	1279	1414	763	531-32	*1356-57	30 Durmukha .	36 Śubhakṛit .	6 Bhādrapada
4459	1280	1415	764	532-33	1357-58	31 Hēmalamba .	37 Śōbhana .	...
4460	1281	1416	765	533-34	1358-59	32 Vilamba .	38 Krōdhin .	...
4461	1282	1417	766	534-35	1359-60	33 Vikārin .	39 Viśvāvasu .	3 Jyēshṭha .
4462	1283	1418	767	535-36	*1360-61	34 Śārvarin .	40 Parābhava .	...
4463	1284	1419	768	536-37	1361-62	35 Plava . .	41 Plavaṅga .	11 Māgha .
4464	1285	1420	769	537-38	1362-63	36 Śubhakṛit .	42 Kīlaka . .	...
4465	1286	1421	770	538-39	1363-64	37 Śōbhana .	43 Saumya .	...
4466	1287	1422	771	539-40	*1364-65	38 Krōdhin .	44 Sādhāraṇa .	8 Kārttika .
4467	1288	1423	772	540-41	1365-66	39 Viśvāvasu .	45 Virōdhakṛit .	...
4468	1289	1424	773	541-42	1366-67	40 Parābhava .	46 Paridhāvin .	...
4469	1290	1425	774	542-43	1367-68	41 Plavaṅga .	47 Pramādin .	4 Āshāḍha .
4470	1291	1426	775	543-44	*1368-69	42 Kīlaka . .	48 Ānanda .	...

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE								
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).	
13	14	17			19	20	23	1
		H.	M.	S.				
27 Mar. (87)	0 Sat.	20	2	30	15 Mar. (75)	2 Mon.	9·2513	4446
28 Mar. (87)	2 Mon.	2	15	0	5 Mar. (64)	0 Sat.	223·5666	4447
28 Mar (87)	3 Tues.	8	27	30	24 Mar. (83)	6 Fri.	258·2062	4448
28 Mar. (87)	4 Wed.	14	40	0	13 Mar. (72)	3 Tues.	133·8897	4449
27 Mar. (87)	5 Thur.	20	52	30	1 Mar. (61)	0 Sat.	9·5730	4450
28 Mar. (87)	0 Sat.	3	5	0	20 Mar. (79)	6 Fri.	44·2126	4451
28 Mar. (87)	1 Sun.	9	17	30	10 Mar. (69)	4 Wed.	258·5279	4452
28 Mar. (87)	2 Mon.	15	30	0	27 Feb. (58)	1 Sun.	134·2112	4453
27 Mar. (87)	3 Tues.	21	42	30	17 Mar. (77)	0 Sat.	168·8509	4454
28 Mar. (87)	5 Thur.	3	55	0	6 Mar. (65)	4 Wed.	44·5342	4455
28 Mar. (87)	6 Fri.	10	7	30	25 Mar. (84)	3 Tues.	79·1738	4456
28 Mar. (87)	0 Sat.	16	20	0	15 Mar. (74)	1 Sun.	293·4891	4457
27 Mar. (87)	1 Sun.	22	32	30	3 Mar. (63)	5 Thur.	169·1725	4458
28 Mar. (87)	3 Tues.	4	45	0	22 Mar. (81)	4 Wed.	203·8121	4459
28 Mar. (87)	4 Wed.	10	57	30	11 Mar. (70)	1 Sun.	79·4955	4460
28 Mar. (87)	5 Thur.	17	10	0	1 Mar. (60)	6 Fri.	293·8108	4461
27 Mar. (87)	6 Fri.	23	22	30	19 Mar. (79)	5 Thur.	328·4504	4462
28 Mar. (87)	1 Sun.	5	35	0	8 Mar. (67)	2 Mon.	204·1338	4463
28 Mar. (87)	2 Mon.	11	47	30	27 Mar. (86)	1 Sun.	238·7731	4464
28 Mar. (87)	3 Tues.	18	0	0	16 Mar. (75)	5 Thur.	114·4568	4465
28 Mar. (88)	5 Thur.	0	12	30	5 Mar. (65)	3 Tues.	328·7721	4466
28 Mar. (87)	6 Fri.	6	25	0	23 Mar. (82)	1 Sun.	24·7798	4467
28 Mar. (87)	0 Sat.	12	37	30	13 Mar. (72)	6 Fri.	289·0951	4468
28 Mar. (87)	1 Sun.	18	50	0	2 Mar. (61)	3 Tues.	114·7785	4469
28 Mar. (88)	3 Tues.	1	2	30	20 Mar. (80)	2 Mon.	149·4181	4470

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3a	4	5	6	7	8a
4471	1292	1427	776	544-45	1369-70	43 Saumya .	49 Rākshasa .	...
4472	1293	1428	777	545-46	1370-71	44 Sādhāraṇa .	50 Anala . .	1 Chaitra .
4473	1294	1429	778	546-47	1371-72	45 Virōdhakṛit .	51 Piṅgala .	...
4474	1295	1430	779	547-48	*1372-73	46 Paridhāvin .	52 Kālayukta .	9 Mārgaśira .
4475	1296	1431	780	548-49	1373-74	47 Pramādin .	53 Siddhārthin .	...
4476	1297	1432	781	549-50	1374-75	48 Ānanda .	54 Raudra .	...
4477	1298	1433	782	550-51	1375-76	49 Rākshasa .	55 Durmati .	6 Bhādrapada
4478	1299	1434	783	551-52	*1376-77	50 Anala . .	56 Dundubhi .	...
4479	1300	1435	784	552-53	1377-78	51 Piṅgala .	57 Rudhirōdgārin	...
4480	1301	1436	785	553-54	1378-79	52 Kālayukta .	58 Raktāksha .	2 Vaiśakha .
4481	1302	1437	786	554-55	1379-80	53 Siddhārthin .	59 Krōdhana .	...
4482	1303	1438	787	555-56	*1380-81	54 Raudra .	60 Kshaya .	11 Māgha .
4483	1304	1439	788	556-57	1381-82	55 Durmati .	1 Prabhava .	...
4484	1305	1440	789	557-58	1382-83	56 Dundubhi .	2 Vibhava .	...
4485	1306	1441	790	558-59	1383-84	57 Rudhirōdgārin	3 Śukla . .	7 Āśvina .
4486	1307	1442	791	559-60	*1384-85	58 Raktāksha .	4 Pramōda .	...
4487	1308	1443	792	560-61	1385-86	59 Krōdhana .	5 Prajāpati .	...
4488	1309	1444	793	561-62	1386-87	60 Kshaya .	6 Aṅgiras .	4 Āshāḍha .
4489	1310	1445	794	562-63	1387-88	1 Prabhava .	7 Śrīmukha .	...
4490	1311	1446	795	563-64	*1388-89	2 Vibhava .	8 Bhāva . .	12 Phālguna .
4491	1312	1447	796	564-65	1389-90	3 Śukla . .	9 Yuvan . .	...
4492	1313	1448	797	565-66	1390-91	4 Pramōda .	10 Dhātṛi . .	...
4493	1314	1449	798	566-67	1391-92	5 Prajāpati .	11 Īśvara . .	9 Mārgaśira .
4494	1315	1450	799	567-68	*1392-93	6 Aṅgiras .	12 Bahudhānya .	...
4495	1316	1451	800	568-69	1393-94	7 Śrīmukha .	13 Pramāthin .	...

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University Library, ditto.
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Sanskrit College Library, Benares.
Secretariat Library, Lahore.
Museum Library, ditto.
University Library, ditto.
Oriental College Library, Lahore.
Secretariat Library, Nagpur.
Museum Library, ditto.
Secretariat Library, Rangoon.
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LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here=*t*, the index of the tithi).	
13	14	17	19	20	23	1
		H. M. S.				
28 Mar. (87) . .	4 Wed. .	7 15 0	9 Mar. (68) .	6 Fri. .	25·1015	4471
28 Mar. (87) . .	5 Thur. .	13 27 30	27 Feb. (58) .	4 Wed. .	239·4167	4472
28 Mar. (87) . .	6 Fri. .	19 40 0	18 Mar. (77) .	3 Tues. .	274·0564	4473
28 Mar. (88) . .	1 Sun. .	1 52 30	6 Mar. (66) .	0 Sat. .	149·7397	4474
28 Mar. (87) . .	2 Mon. .	8 5 0	25 Mar. (84) .	6 Fri. .	184·3794	4475
28 Mar. (87) . .	3 Tues. .	14 17 30	14 Mar. (73) .	3 Tues. .	60·0627	4476
28 Mar. (87) . .	4 Wed. .	20 30 0	4 Mar. (63) .	1 Sun. .	274·3779	4477
28 Mar. (88) . .	6 Fri. .	2 42 30	22 Mar. (82) .	0 Sat. .	309·0176	4478
28 Mar. (87) . .	0 Sat. .	8 55 0	11 Mar. (70) .	4 Wed. .	184·7009	4479
28 Mar. (87) . .	1 Sun. .	15 7 30	28 Feb. (59) .	1 Sun. .	60·3844	4480
28 Mar. (87) . .	2 Mon. .	21 20 0	19 Mar. (78) .	0 Sat. .	95·0230	4481
28 Mar. (88) . .	4 Wed. .	3 32 30	8 Mar. (68) .	5 Thur. .	309·3392	4482
28 Mar. (87) . .	5 Thur. .	9 45 0	26 Mar. (85) .	3 Tues. .	5·3469	4483
28 Mar. (87) . .	6 Fri. .	15 57 30	16 Mar. (75) .	1 Sun. .	219·6622	4484
28 Mar. (87) . .	0 Sat. .	22 10 0	5 Mar. (64) .	5 Thur. .	95·3456	4485
28 Mar. (88) . .	2 Mon. .	4 22 30	23 Mar. (83) .	4 Wed. .	129·9852	4486
28 Mar. (87) . .	3 Tues. .	10 35 0	12 Mar. (71) .	1 Sun. .	5·6686	4487
28 Mar. (87) . .	4 Wed. .	16 47 30	2 Mar. (61) .	6 Fri. .	219·9839	4488
28 Mar. (87) . .	5 Thur. .	23 0 0	21 Mar. (80) .	5 Thur. .	254·6235	4489
28 Mar. (88) . .	0 Sat. .	5 12 30	9 Mar. (69) .	2 Mon. .	130·3069	4490
28 Mar. (87) . .	1 Sun. .	11 25 0	28 Mar. (87) .	1 Sun. .	164·9464	4491
28 Mar. (87) . .	2 Mon. .	17 37 30	17 Mar. (76) .	5 Thur. .	40·6298	4492
28 Mar. (87) . .	3 Tues. .	23 50 0	7 Mar. (66) .	3 Tues. .	254·9451	4493
28 Mar. (88) . .	5 Thur. .	6 2 30	25 Mar. (85) .	2 Mon. .	289·5848	4494
28 Mar. (87) . .	6 Fri. .	12 15 0	14 Mar. (73) .	6 Fri. .	165·2681	4495

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Meshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3a	4	5	6	7	8a
4496	1317	1452	801	569-70	1394-95	8 Bhāva . .	14 Vikrama .	6 Bhādrapada
4497	1318	1453	802	570-71	1395-96	9 Yuvan . .	15 Vṛisha . .	...
4498	1319	1454	803	571-72	*1396-97	10 Dhātṛi . .	16 Chitrabhanu .	...
4499	1320	1455	804	572-73	1397-98	11 Īśvara . .	17 Subhānu	2 Vaiśākha .
4500	1321	1456	805	573-74	1398-99	12 Bahudhanya .	18 Tāraṇa . .	...
4501	1322	1457	806	574-75	1399-00	13 Pramāthin .	19 Pārthiva .	11 Māgha .
4502	1323	1458	807	575-76	*1400-01	14 Vikrama .	20 Vyaya . .	...

LXXVI—*Concld.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mesha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the tithi).	
13	14	17	19	20	23	1
		H. M. S.				
28 Mar. (87) . .	0 Sat. .	18 27 30	3 Mar. (62) .	3 Tues. .	40·9515	4496
29 Mar (88) . .	2 Mon. .	0 40 0	22 Mar. (81) .	2 Mon. .	75·5912	4497
28 Mar. (88) . .	3 Tues. .	6 52 30	11 Mar. (71) .	0 Sat. .	289·9064	4498
28 Mar. (87) . .	4 Wed. .	13 5 0	28 Feb. (59) .	4 Wed. .	165·5898	4499
28 Mar. (87) . .	5 Thur. .	19 17 30	19 Mar. (78) .	3 Tues. .	200·2294	4500
29 Mar. (88) . .	0 Sat. .	1 30 0	8 Mar. (67) .	0 Sat. .	75·9127	4501
28 Mar. (88) . .	1 Sun. .	7 42 30	26 Mar. (86) .	6 Fri. .	110·5523	4502

TABLE LXXVII.

DURATION AND COLLECTIVE DURATION OF MEAN SOLAR MONTHS ACCORDING TO THE FIRST ĀRYA SIDDHĀNTA, WITH INCREASE OF *a* AT EACH SAṀKRĀNTI.

Mean luni-solar month, ending after the second of the two solar saṁkrāntis connected with it.	At the mean solar saṁkrāntis.	Collective duration in time and collective increase of *a* from mean Mēsha-saṁkrānti to the several saṁkrāntis.					
		Day.	Week-day.	H.	M.	S.	*a*
1	2	3					4
	Mīna-saṁk. (*of previous year*).						
1. Chaitra							
	Mēsha-saṁk.	0	0	0	0	0	0
2. Vaiśākha							
	Vrishabha-saṁk.	30	(2)	10	31	2½	307·3526
3. Jyēshṭha							
	Mithuna-saṁk.	60	(4)	21	2	5	614·7052
4. Āshāḍha							
	Karka-saṁk.	91	(0)	7	33	7½	922·0579
5. Śrāvaṇa							
	Siṁha-saṁk.	121	(2)	18	4	10	1229·4105
6. Bhādrapada							
	Kanyā-saṁk.	152	(5)	4	35	12½	1536·7631
7. Āśvina							
	Tulā-saṁk.	182	(0)	15	6	15	1844·1157
8. Kārttika							
	Vriśchika-saṁk.	213	(3)	1	37	17½	2151·4684
9. Mārgaśira							
	Dhanus-saṁk.	243	(5)	12	8	20	2458·8210
10. Pausha							
	Makara-saṁk.	273	(0)	22	39	22½	2766·1736
11. Māgha							
	Kumbha-saṁk.	304	(3)	9	10	25	3073·5262
12. Phālguna							
	Mīna-saṁk.	334	(5)	19	41	27½	3380·8789
1. Chaitra (*of following year*).							
	Mēsha-saṁk. (*of following year*).	365	(1)	6	12	30	3688·2315*

The duration of each mean solar month is 30d. 10h. 31m. 2½s.; and during this period in addition to one whole revolution, the mean moon increases her distance from mean sun, in measurement by 10,000ths of circle by, (or in other words the monthly increase of a =) 307·352623 726.

* More fully 3688·231484714.

TABLE LXXVIII.

VALUE OF a (=t) AT BEGINNING OF CENTURIES OF THE KALIYUGA, ACCORDING TO THE FIRST ARYA SIDDHÂNTA MEAN SYSTEM.

[The value of a to be added for beginning of odd years of centuries is given in Table LXXIII above. W.-D.=Week-day.]

Century K. Y.	W.-D.	a (= t).
36	1	7715·3525
37	1	6583·1816
38	0	5112·3787
39	0	3980·2078
40	0	2848·0369
41	0	1715·8659
42	0	583·6950
43	0	9451·5240
44	0	8319·3531
45	0	7187·1822
46	6	5716·3793
47	6	4584·2084
48	6	3452·0375

The duration of each mean solar month is 30d. 10h. 31m. 2½s., and during this period in addition to one whole revolution, the mean moon increases her distance from mean sun, in measurement by 10,000ths of circle by, (or in other words the monthly increase of a=) 307·352623726.

N.B.—These values of a agree generally with Professor Jacobi's values above (Vol. XI, p. 164). The apparent differences are due to two causes; (*i*) The present estimate of the sum of the greatest equations of moon and sun is about 0·4 greater than that of Professor Jacobi. (*ii*) The values here stated for the beginnings of centuries 38 to 42 are for mean sunrise on Saturdays, while his are for mean sunrise on the following Sundays.

TABLE LXXIX.

MEAN SUNRISE VALUES OF a (DISTANCE OF MEAN MOON FROM MEAN SUN), IN 10,000THS OF CIRCLE, FOR A MONTH PREVIOUS TO THE DAY OF MEAN MĒSHA-SAṀKRÂNTI.

Interval of days from mean Mēsha-saṁkrânti day.	W.-D.	a. (mean sunrise value).	Interval of days from mean Mēsha-saṁkrânti day.	W.-D.	a. (mean sunrise value).
31	4	9502·4119	15	6	4920·5219
30	5	9841·0438	14	0	5259·1538
29	6	179·6756	13	1	5597·7856
28	0	518·3075	12	2	5936·4175
27	1	856·9394	11	3	6275·0494
26	2	1195·5713	10	4	6613·6813
25	3	1534·2032	9	5	6952·3131
24	4	1872·8350	8	6	7290·9450
23	5	2211·4669	7	0	7629·5769
22	6	2550·0988	6	1	7968·2088
21	0	2888·7306	5	2	8306·8406
20	1	3227·3625	4	3	8645·4725
19	2	3565·9944	3	4	8984·1044
18	3	3904·6263	2	5	9322·7263
17	4	4243·2581	1	6	9661·3681
16	5	4581·8900	0	0	0

N.B.—The use of this Table is explained in example 1.

TABLE LXXX.

THE SUN'S MEAN LONGITUDE DURING THE HINDU SOLAR YEAR, IN 10,000THS OF CIRCLE, ACCORDING TO THE FIRST ĀRYA SIDDHĀNTA, AT PERIODS OF 24 HOURS EACH, MEASURED FROM THE MOMENT OF MEAN MESHA-SAṀKRĀNTI.

The same in degrees, etc., can be calculated by Table XLIV, Vol. XIV above.

24-hour period.	Sun's mean longitude.	24-hour period.	Sun's mean longitude.	24-hour period.	Sun's mean longitude.	24-hour period.	Sun's mean longitude.
1	2	1	2	1	2	1	2
At moment of mean Mēsha-saṁkrānti.	*0*	42	1149·8700	87	2381·8736	127	3476·9879
1	27·3779	43	1177·2479	88	2409·2514	128	3504·3657
2	54·7557	44	1204·5257	89	2436·6293	129	3531·7436
3	82·1336	45	1232·0036	90	2464·0071	130	3559·1214
4	109·5114	46	1259·3814	91	2491·3850	131	3586·4993
5	136·8893	47	1286·7593	*At moment of mean Karka saṁkrānti.*	*2500·0*	132	3613·8772
6	164·2671	48	1314·1371	92	2518·7629	133	3641·2550
7	191·6450	49	1341·5150	93	2546·1407	134	3668·6329
8	219·0229	50	1368·8929	94	2573·5186	135	3696·0107
9	246·4007	51	1396·2707	95	2600·8964	136	3723·3886
10	273·7786	52	1423·6486	96	2628·2743	137	3750·7664
11	301·1564	53	1451·0264	97	2655·6521	138	3778·1443
12	328·5343	54	1478·4043	98	2683·0300	139	3805·5222
13	355·9121	55	1505·7821	99	2710·4079	140	3832·9000
14	383·2900	56	1533·1600	100	2737·7857	141	3860·2779
15	410·6679	57	1560·5379	101	2765·1636	142	3887·6557
16	438·0457	58	1587·9157	102	2792·5414	143	3915·0336
17	465·4236	59	1615·2936	103	2819·9193	144	3942·4114
18	492·8014	60	1642·6714	104	2847·2971	145	3969·7893
19	520·1793	*At moment of mean Mithuna saṁkrānti.*	*1666·6̇*	105	2874·6750	146	3997·1672
20	547·5571	61	1670·0493	106	2902·0529	147	4024·5450
21	574·9350	62	1697·4271	107	2929·4307	148	4051·9229
22	602·3129	63	1724·8050	108	2956·8086	149	4079·3007
23	629·6907	64	1752·1829	109	2984·1864	150	4106·6786
24	657·0686	65	1779·5607	110	3011·5643	151	4134·0564
25	684·4464	66	1806·9386	111	3038·9421	152	4161·4343
26	711·8243	67	1834·3164	112	3066·3200	*At moment of mean Kanyā saṁkrānti.*	*4166·6̇*
27	739·2021	68	1861·6943	113	3093·6979	153	4188·8122
28	766·5800	69	1889·0721	114	3121·0757	154	4216·1900
29	793·9579	70	1916·4500	115	3148·4536	155	4243·5679
30	821·3357	71	1943·8279	116	3175·8314	156	4270·9457
At moment of mean Vrishabha saṁkrānti.	*833·3̇*	72	1971·2057	117	3203·2093	157	4298·3236
31	848·7136	73	1998·5836	118	3230·5872	158	4325·7014
32	876·0914	74	2025·9614	119	3257·9650	159	4353·0793
33	903·4693	75	2053·3393	120	3285·3429	160	4380·4572
34	930·8471	76	2080·7171	121	3312·7207	161	4407·8350
35	958·2250	77	2108·0950	*At moment of mean Siṁha saṁkrānti.*	*3333·3̇*	162	4435·2129
36	985·6029	78	2135·4729	122	3340·0986	163	4462·5907
37	1012·9807	79	2162·8507	123	3367·4764	164	4489·9686
38	1040·3586	80	2190·2286	124	3394·8543	165	4517·3464
39	1067·7364	81	2217·6064	125	3422·2322	166	4544·7243
40	1095·1143	82	2244·9843	126	3449·6100	167	4572·1022
41	1122·4921	83	2272·36[illegible]1			168	4599·4800
		84	2299·7400			169	4626·8579
		85	2327·1179			170	4654·2357
		86	2354·4957			171	4681·6136

TABLE LXXX—*Contd.*

24-hour period.	Sun's mean longitude.	24-hour period.	Sun's mean longitude.	24-hour period.	Sun's mean longitude.	24-hour period.	Sun's mean longitude.
1	2	1	2	1	2	1	2
172	4708·9914	220	6023·1286	272	7446·7772	320	8760·9143
173	4736·3693	221	6050·5064	273	7474·1550	321	8788·2922
174	4763·7472	222	6077·8843	*At moment of mean Makara saṁkrānti.*	7500·0	322	8815·6700
175	4791·1250	223	6105·2622	274	7501·5329	323	8843·0479
176	4818·5029	224	6132·6400	275	7528·9107	324	8870·4257
177	4845·8807	225	6160·0179	276	7556·2886	325	8897·8036
178	4873·2586	226	6187·3957	277	7583·6664	326	8925·1814
179	4900·6364	227	6214·7736	278	7611·0143	327	8952·5593
180	4928·0143	228	6242·1514	279	7638·4222	328	8979·9372
181	4955·3922	229	6269·0593	280	7665·8000	329	9007·3150
182	4982·7700	230	6296·9072	281	7693·1779	330	9034·6929
At moment of mean Tulā saṁkrānti.	5000·0	231	6324·2850	282	7720·5557	331	9062·0707
183	5010·1479	232	6351·6629	283	7747·9336	332	9089·4486
184	5037·5257	233	6379·0407	284	7775·3114	333	9116·8264
185	5064·9036	234	6406·4186	285	7802·6893	334	9144·2043
186	5092·2814	235	6433·7964	286	7830·0672	*At moment of mean Mīna-saṁkrānti.*	9166·6̇
187	5119·6593	236	6461·1743	287	7857·4450	335	9171·5822
188	5147·0372	237	6488·5522	288	7884·8229	336	9198·9600
189	5174·4150	238	6515·9300	289	7912·2007	337	9226·3379
190	5201·7929	239	6543·3079	290	7939·5786	338	9253·7157
191	5229·1707	240	6570·6857	291	7966·9564	339	9281·0936
192	5256·5486	241	6598·0636	292	7994·3343	340	9308·4715
193	5283·9264	242	6625·4414	293	8021·7122	341	9335·8493
194	5311·3043	243	6652·8193	294	8049·0900	342	9363·2272
195	5338·6822	*At moment of mean Dhanus saṁkrānti.*	6666·6̇	295	8076·4679	343	9390·6050
196	5366·0600	244	6680·1972	296	8103·8457	344	9417·9829
197	5393·4379	245	6707·5750	297	8131·2236	345	9445·3607
198	5420·8157	246	6734·9529	298	8158·6014	346	9472·7386
199	5448·1936	247	6762·3307	299	8185·9793	347	9500·1165
200	5475·5714	248	6789·7086	300	8213·3572	348	9527·4943
201	5502·9493	249	6817·0864	301	8240·7350	349	9554·8722
202	5530·3272	250	6844·4643	302	8268·1129	350	9582·2500
203	5557·7050	251	6871·8422	303	8295·4907	351	9609·6279
204	5585·0829	252	6899·2200	304	8322·8686	352	9637·0057
205	5612·4607	253	6926·5979	*At moment of mean Kumbha saṁkrānti.*	8333·3̇	353	9664·3836
206	5639·8386	254	6953·9757	305	8350·2464	354	9691·7615
207	5667·2164	255	6981·3536	306	8377·6243	355	9719·1393
208	5694·5943	256	7008·7314	307	8405·0022	356	9746·5172
209	5721·9722	257	7036·1093	308	8432·3800	357	9773·8950
210	5749·3500	258	7063·4872	309	8459·7579	358	9801·2729
211	5776·7279	259	7090·8650	310	8487·1357	359	9828·6507
212	5804·1057	260	7118·2429	311	8514·5136	360	9856·0286
213	5831·4836	261	7145·6207	312	8541·8914	361	9883·4065
At moment of mean Vṛiśchika saṁkrānti.	5833·3̇	262	7172·9986	313	8569·2693	362	9910·7843
214	5858·8614	263	7200·3764	314	8596·6472	363	9938·1622
215	5886·2393	264	7227·7543	315	8624·0250	364	9965·5400
216	5913·6172	265	7255·1322	316	8651·4029	365	9992·9179
217	5940·9950	266	7282·5100	317	8678·7807	*At moment of mean Mēsha-saṁkrānti of following year.*	10,000·0
218	5968·3729	267	7309·8879	318	8706·1586		
219	5995·7507	268	7337·2657	319	8733·5364		
		269	7364·6436				
		270	7392·0214				
		271	7419·3993				

TABLE LXXXI.

SUN'S MEAN LONGITUDE. INCREASE IN FRACTIONS OF DAY ACCORDING TO THE FIRST ARYA SIDDHANTA.

(For the same in degrees, etc., see above, Vol. XIV, Table XLIV.)

INCREASE PER HOUR.		INCREASE PER MINUTE.				INCREASE PER SECOND.			
No.	In 10,000ths of circle.	No.	In 10,000ths of circle.	No.	In 10,000ths of circle.	No.	In 10,000ths of circle.	No.	In 10,000ths of circle.
1	1·1407	1	0·0190	31	0·5894	1	0·0003	31	0·0098
2	2·2815	2	0·0380	32	0·6084	2	0·0006	32	0·0101
3	3·4222	3	0·0570	33	0·6274	3	0·0010	33	0·0105
4	4·5630	4	0·0760	34	0·6464	4	0·0013	34	0·0108
5	5·7037	5	0·0951	35	0·6654	5	0·0016	35	0·0111
6	6·8445	6	0·1141	36	0·6844	6	0·0019	36	0·0114
7	7·9852	7	0·1331	37	0·7035	7	0·0022	37	0·0117
8	9·1260	8	0·1521	38	0·7225	8	0·0025	38	0·0120
9	10·2667	9	0·1711	39	0·7415	9	0·0029	39	0·0124
10	11·4074	10	0·1901	40	0·7605	10	0·0032	40	0·0127
11	12·5482	11	0·2091	41	0·7795	11	0·0035	41	0·0130
12	13·6889	12	0·2281	42	0·7985	12	0·0038	42	0·0133
13	14·8297	13	0·2472	43	0·8175	13	0·0041	43	0·0136
14	15·9704	14	0·2662	44	0·8365	14	0·0044	44	0·0139
15	17·1112	15	0·2852	45	0·8556	15	0·0048	45	0·0143
16	18·2519	16	0·3042	46	0·8746	16	0·0051	46	0·0146
17	19·3926	17	0·3232	47	0·8936	17	0·0054	47	0·0149
18	20·5334	18	0·3422	48	0·9126	18	0·0057	48	0·0152
19	21·6741	19	0·3612	49	0·9316	19	0·0060	49	0·0155
20	22·8149	20	0·3802	50	0·9506	20	0·0063	50	0·0158
21	23·9556	21	0·3993	51	0·9696	21	0·0067	51	0·0162
22	25·0964	22	0·4183	52	0·9886	22	0·0070	52	0·0165
23	26·2371	23	0·4373	53	1·0077	23	0·0073	53	0·0168
		24	0·4563	54	1·0267	24	0·0076	54	0·0171
		25	0·4753	55	1·0457	25	0·0079	55	0·0174
		26	0·4943	56	1·0647	26	0·0082	56	0·0177
		27	0·5133	57	1·0837	27	0·0086	57	0·0181
		28	0·5323	58	1·1027	28	0·0089	58	0·0184
		29	0·5514	59	1·1217	29	0·0092	59	0·0187
		30	0·5704			30	0·0095		

No. 7.—TWO NEW GRANTS OF DHRUVASENA [I.] FROM PALITANA.

By V. S. Sukthankar, Ph.D.

I edit here two new Valabhi copper-plate grants (one complete and one incomplete) which were presented, in 1918, to the Trustees of the Prince of Wales Museum, Bombay, by the Bhāvnagar Darbar, which is ever ready to further the cause of epigraphic research by placing ungrudgingly the materials, as they are discovered, in the hands of students of Indian history for investigation and publication, and, when possible, by having them exhibited in centrally situated museums. The plates under reference were discovered at the bottom of a small tank outside the Śatruñjaya Gate at Pālitānā while the tank was being drained during the time of the late Thakor Saheb of that State.[1]

A.—PLATES OF DHRUVASENA I.; [VALABHI]-SAM[VAT] 207.

The **plates**, which are inscribed on one side only, are two in number, each measuring roughly 11⅓" broad by 6¾" high. The edges are just slightly raised in order to protect the writing, which (excepting portions of ll. 1-4) is in a state of perfect preservation. The plates are of fair thickness; but the letters, being deep, show through on the reverse sides. The engraving is well executed. Each of the plates has two holes bored in it. A ring of copper passing through one pair of them serves to hold the plates together at one end. The seal, which is an invariable accompaniment of such plates, is missing. The aggregate weight of the plates is about 102 *tōlas*. Each plate contains twelve lines of writing; the last line but one of the second plate contains the date.

From the foregoing description of the plates, as well as from the facsimiles of them appearing with this article, it will be evident that this record does not differ in any striking particular from any of the hitherto published records of the same king. Only in the portion dealing with the grant proper does the text of this inscription differ, for example, from that of other plates of this king which were discovered some years back also at Pālitānā, and have been edited by Dr. Sten Konow in a former issue of this Journal.[2] The royal donor, Dhruvasēna, as well as the *dūtaka* Mammaka and the writer Kikkaka, are names well known to the Indian epigraphist. It will, therefore, be unnecessary to go here into a minute description of the characters and orthography of this inscription. It will suffice to observe that the **alphabet** offers a specimen of final *t* (l. 15), final *m* (l. 23) and the numerical ideograms 200, 7, and 5, and that the name of the founder of the dynasty is spelt as *Bhaṭakka* (l. 3). At the end of line 12 is to be found a horizontal stroke, about ¼" long, evidently drawn with a view to fill up the empty space remaining at the end. The reason for leaving the space vacant appears to be that the writer did not wish to commence, at the end of the line, a long word the whole of which would not have been contained in the short space that was left over.

The inscription is one of the *Mahārāja* **Dhruvasēna [I.]** of the **Maitraka** dynasty, and the grant contained in it is issued from the city of **Valabhī**. The object of the inscription appears to be to record the confirmation by Dhruvasēna of the donee, a Brāhmaṇa named Mādhava, of the Śunaka *gōtra*, student of the Chhandōga School, and resident of the village of **Jyēshṭhānaka** (stated to be **Akshasaraka**-*prāvēśya*) in the **Hastavapra-haraṇī** in the possession of some

[1] My friend Pandit Girijasankar Vallabhji of Rajkot, Curator of the Prince of Wales Museum, Bombay, informs me that the five Pālitānā plates edited by Prof. Konow (above, Vol. XI, pp. 104 ff.) were discovered at the same place and at the same time as the plates here described.

[2] Above, Vol. XI, pp. 104 ff.

land already enjoyed by him in the village of which he was a resident. Besides Hastavapra, which is the modern **Hāthab** (6 miles south of Gōghā in the Bhāvnagar State), and **Valabhī**, which is commonly identified with the modern **Valā** (situated in 21° 52′ N. and 71° 57′ E.), none of the places can be located. The **date** of the record is the **year 207** (given as usual in numerical ideograms), and the 5th (*tithi*) of the dark fortnight of **Vaiśākha**. The year when referred to the Gupta-Valabhī era yields A.D. (207+320)=A.D. 527.

There are two expressions in this inscription, both occurring in the portion dealing with the grant proper, which deserve some comment: they are *Akshasaraka-prāvēśya-* (l. 12) and *sa-śaibaram* (l. 16). The latter we will consider first.

Being mentioned along with the well-known technical expressions *sa-hiraṇy-ādēyam* and *sa-bhūta-vāta°*, *sa-śaibaram* must be a term of like nature, *i.e.* a technicality of the lawyers; but what its significance may be I am unable to surmise. There can be no question regarding the correctness of the reading; the letters are perfectly distinct. The word *śaibara* is not to be found in dictionaries; nor have I come across it elsewhere. I can only think that it may be, as it stands, a clerical error; but I am unable to suggest any plausible emendation for it.

The word *prāvēśya* in the other expression referred to above is also one that presents some difficulty to the interpreter. Here it is used in a compound with Akshasaraka, evidently a place-name, and serves to locate more definitely the village Jyēshṭhānaka situated in the Hastavapra-*haraṇī*. As far as I know, the word *prāvēśya* has been met with only twice before: once in another Valabhī grant, occurring there in a compound with the same place-name Akshasaraka, and once again in the Khariar grant of Mahāsudēva, compounded with the word Navannaka, which is also a place-name.

The former record forms one of the five Valabhī grants from Pālitāṇā[1] edited by Prof. Sten Konow, and is a grant of Dhruvasēna I., dated in Saṁvat 210. In that connection Prof. Konow rightly points out that the phrase Akshasaraka-*prāvēśya* of the grant corresponds to the Akshasaraka-*prāpīya* in a third Valabhī grant,[2] *viz.* the Gaṇēśgaḍ (Baroda) plates of Dhruvasēna, dated Saṁvat 207. Hultzsch, when editing the latter grant, translated the phrase by 'which belongs to the Akshasaraka-*prāpa*.' Prof. Konow, who regards *prāvēśya* and *prāpīya* as synonyms, rejects Hultzsch's rendering of Akshasaraka-*prāpīya* and advances the suggestion that *prāvēśya* in this connection means the same thing as in the phrase *a-chāṭa-bhaṭa-prāvēśya*, and accordingly translates the phrase by 'which can be entered from (*i.e.*, which borders on) Akshasaraka.' I cannot, in the first place, admit that the expressions *a-chāṭa-bhaṭa-prāvēśya* and Akshasaraka-*prāvēśya* correspond exactly. For in the former the first member of the compound comprises the logical subject of the verb contained in *prāvēśya*; but such cannot be the case with the second expression, even if we assign to it the meaning which Prof. Konow does. Secondly, I do not understand what is meant by saying that a village could be 'entered' from such and such a place. If, moreover, *prāvēśya* meant the same thing as 'bordering on,' as Prof. Konow asserts, I cannot help thinking that the writer would have employed a simple word like *samīpa* or *pārśva-vartin*, which lie at hand, to express that simple idea of proximity rather than use the circumlocution of *prāvēśya* or *prāpīya*. Hultzsch, on the other hand, appears to me to be undoubtedly on the right track. He looks upon *prāpīya* as a derivative of *prāpa*, which he takes to be a word denoting a territorial division smaller than an *āhāra*. Similarly the analogous term *prāvēśya* should also be looked upon as a *taddhita* of *prāvēśa*. That this derivation is correct may be seen from the Khariar plates of Mahāsudēva, in which a village is described (l. 4) as *Kshitimad-āhārīya* and *Navannaka-etat-prāvēśya*. No one will dispute that *āhārīya* is derived from *āhāra* ('district,' 'province') by the addition of the suffix *-īya*. That supplies us with the clue to the explanation of the other words under consideration here. All these words are derived

[1] Above, Vol. XI, pp. 104 ff., and Plates.

[2] Above, Vol. III, p. 320, and Plate.

by the addition of the secondary -(*i*)*ya* to the strengthened forms of the roots *ā-hṛi*, *pra-*(*ā-*)*viś* and *pra-*(*ā-*)*āp* ('bring to,' 'carry to'), words with only minute differences of meaning. I feel, therefore, constrained to reject the interpretation of Prof. Konow in favour of the other. *Prāpīya* I take to be 'that which belongs to the *prāpa*,' and *prāvēśya* 'that which belongs to the *prāvēśa* (or *pravēśa*)'; both *prāpa* and *prāvēśa* I regard as territorial divisions smaller than the *āhāra*.

TEXT.[1]

Plate A_1.

10 [2]परमभट्टारकपादानुध्या(ध्या)तो महाराजध्रुवसेन: कुशली सर्व्वानेव स्वानायुक्त-
नियुक्तकचाट-

11 भटद्राङ्गिकमहत्तरध्रुवस्थानाधिकरणिकदाण्डपाशिकादीनन्यांश्च[3] यथासंबध्यमान-
[4]कननु-

12 दर्शयत्यस्तु वस्संविदितं यथा मया हस्तवप्रहरण्यामचसरकप्रावेश्य-[5]

Plate A_2.

13 ज्येष्ठानकग्रामे उत्तरसीम्नि पादावर्त्तशतं षड्धिकं तस्मिन्नव[6] ग्रामव[7]व्यशुनक-

14 सगोत्राणां छन्दोगसब्रह्मचारीणां[8] ब्रह्मणमाधवपूर्व्वभुज्यभुज्यमानकं[9](:) मातापित्रो:

15 पुण्याप्यायनायात्मना[10]चैहिकामुष्मिकयथाभिलषितफलावाप्तिनिमित्ता[11]माचन्द्रार्का-
र्णवक्षितिसरित्-

16 पर्व्वतस्थितिसमकालीनं पुत्रपौत्रान्वयभोज्य[12] सर्व्वरं सहि[र*]ण्यादेयं सभूतवा-
तप्रत्यायविशुद्धा[13]

17 उदकातिसर्ग्गेण ब्रह्मदेयं निसृष्ट[14][।*] यत: एषां ब्रह्मदेयस्थित्या भुजता[15]
कृषतां प्रदिशताश्च[16]

18 स्वल्पाप्याबधा[17] विचारणा वा न कार्य्यास्मद्वंशजैर[18]गामिभद्रनृपतिभिश्च[19]नित्या-
न्यैश्वर्य्याण्यस्थिरं मानुष्यं

19 सामान्य[20] च भूमिदानफलमवगच्छद्भिरयमस्मद्दायोनुमन्तव्य [:।*] (उ) यश्चिच्छन्द्या-
दच्छिद्यमानं[21] वानुमोदे-

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[1] From the original plates, and a set of estampages.

[2] Up to this, the text is practically identical with the text of the Pālitānā plate of Dhruvasēna I. (dated *saṁvat* 206), published above, Vol. XI, pp. 106 ff. The only *variæ lectiones* are unimportant mistakes of orthography, which it would be unnecessary to register individually as the facsimiles are there for reference.

[3] Read न्यांश्च.

[4] Read °कानानु-.

[5] In the original a short horizontal stroke after श्य.

[6] Read न्नेव.

[7] A short vacant space between व and व्य. Read ग्रामवास्तव्य°.

[8] Read °चारिणां ब्राह्मण°.

[9] Read °पूर्व्वभुक्तभुज्यमानक°. The *anusvāra* is written over the line between क: and मा. The letters *pūrvvā-bhujyā-bhujyamānakaḥ* have been engraved over some faintly incised letters.

[10] Read श्च.

[11] Read त्त.

[12] Read ज्यं.

[13] Read द्धं.

[14] Read ष्टं.

[15] Read भुंजतां.

[16] Read तांश्च.

[17] Read °बाधा.

[18] Read रा.

[19] Read श्चा.

[20] Read न्यं.

[21] Read यश्चाच्छिन्द्यादाच्छि°.

20 स पंचभिः महापातकैस्सोपपातकैस्संयुक्तस्य[1]दपि चात्र व्यासगीताः श्लोका भवन्ति [॥*] बहुभिर्व्वसुधा

21 भुक्ता राजभिस्सगरादिभि[: ।*] यस्य यस्य यदा भूमिः तस्य तस्य तदा फलं [॥*] स्वदत्तां परदत्तां वा यो हरेत

22 वसुन्धरां [।*] गवां शतसहस्रस्य हन्तु[:*] [2]प्राप्नोति किल्बिषां[3] [॥*] पूर्व्व-दत्तां द्विजातिभ्यो यत्नाद्रक्ष युधिष्ठर(:) [।*]

23 महि[4] महिमतां श्रेष्ठ दानाच्छ्रेयोनुपालनम् [॥*] दूतकः प्रतीहारमम्मकः [॥*] सं २०० ७ वैशख[5] ब ५ [॥*]

24 स्वहस्तो मम महाराजध्रु[व*]सेनस्य [॥*] लिखितं किक्ककेनति[6] [॥*]

TRANSLATION.

[Ll. 1-11 contain the usual preamble; for translation, cf., for instance, that of the opening lines of the Pālitānā plates, No. 1, edited by Prof. Konow, *Ep. Ind.*, Vol. XI, p. 108.]

(Ll. 12-16.) Be it known to you that for the purpose of increasing the religious merit of (my) mother and father, and for the sake of the attainment of the desired reward both in this world and in the next, I have confirmed, as *brahma-dēya*, with libation of water, (the enjoyment of) one hundred and sixty *pādāvarttas*, on the northern boundary of the **Jyēshṭhānaka** village belonging to the **Akshasaraka**-*prāvēśya* in the **Hastavapra**-*haraṇī*, which had (formerly) been and are (still) being enjoyed (by the donee[7]), for (the benefit of) the resident of the same village, (namely,) the Brāhmaṇa **Mādhava** of the Śunaka *gōtra*, a student of the Chhandōga School,—to last for the same time as the moon, sun, ocean, earth, the rivers and mountains, to be enjoyed by the succession of his sons and sons' sons,—with (?) *śaibara*, with gold (and) *ādēya*, with *bhūta*, *vāta*, and (?) surety of holding (*pratyāya*).

(Ll. 17-19.) Wherefore, no enquiry should be made or obstruction caused (to him) by any one, while he is, according to the proper conditions of a *brahma-dēya*, enjoying, cultivating, or assigning (it to others). And this our gift should be assented to by those born in our lineage, and by future good kings, bearing in mind that power is perishable, the life of man is uncertain, and that the reward of a gift of land is common. And he who confiscates it or assents to its confiscation incurs the guilt of the five great sins together with the minor ones.

(Ll. 20-22.) There are also two verses sung by Vyāsa about this.

[Here follow two of the customary verses.]

(L. 23.) The *dūtaka* is the *pratīhāra* **Mammaka**. (Dated the) **5th** (*tithi*) of the **dark** (fortnight) of **Vaiśākha** (in the) **year 200 7**.

(L. 24.) (This is) the sign-manual of me *Mahārāja* **Dhruvasēna** [I.]. Written by **Kikkaka**.

B.—ANOTHER PLATE OF [DHRUVASENA I.].

This **plate**, which contains only the opening portion of a land-grant of the Maitraka king Dhruvasēna I., is inscribed on one side only and measures roughly $10\frac{3}{4}''$ broad by $6\frac{1}{8}''$ high. The

[1] Read स्तथा.

[2] Over प्रा there is a peculiar sign, the meaning of which is not apparent. [Ithink it is *upadmānīya*.—Ed.]

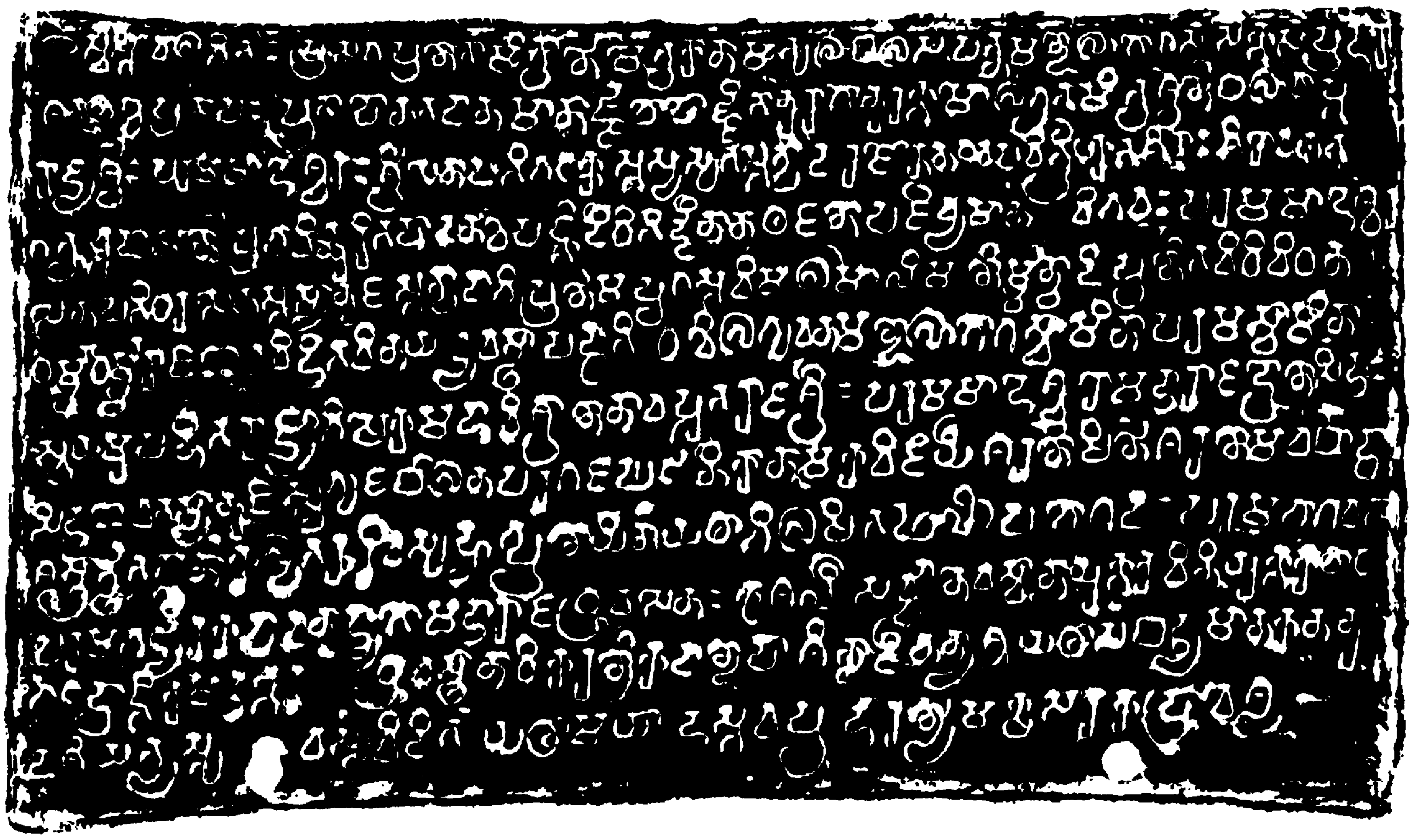
[3] Read षं. [4] Read हीं. [5] Read वैशाख.

[6] Read° केनेति.

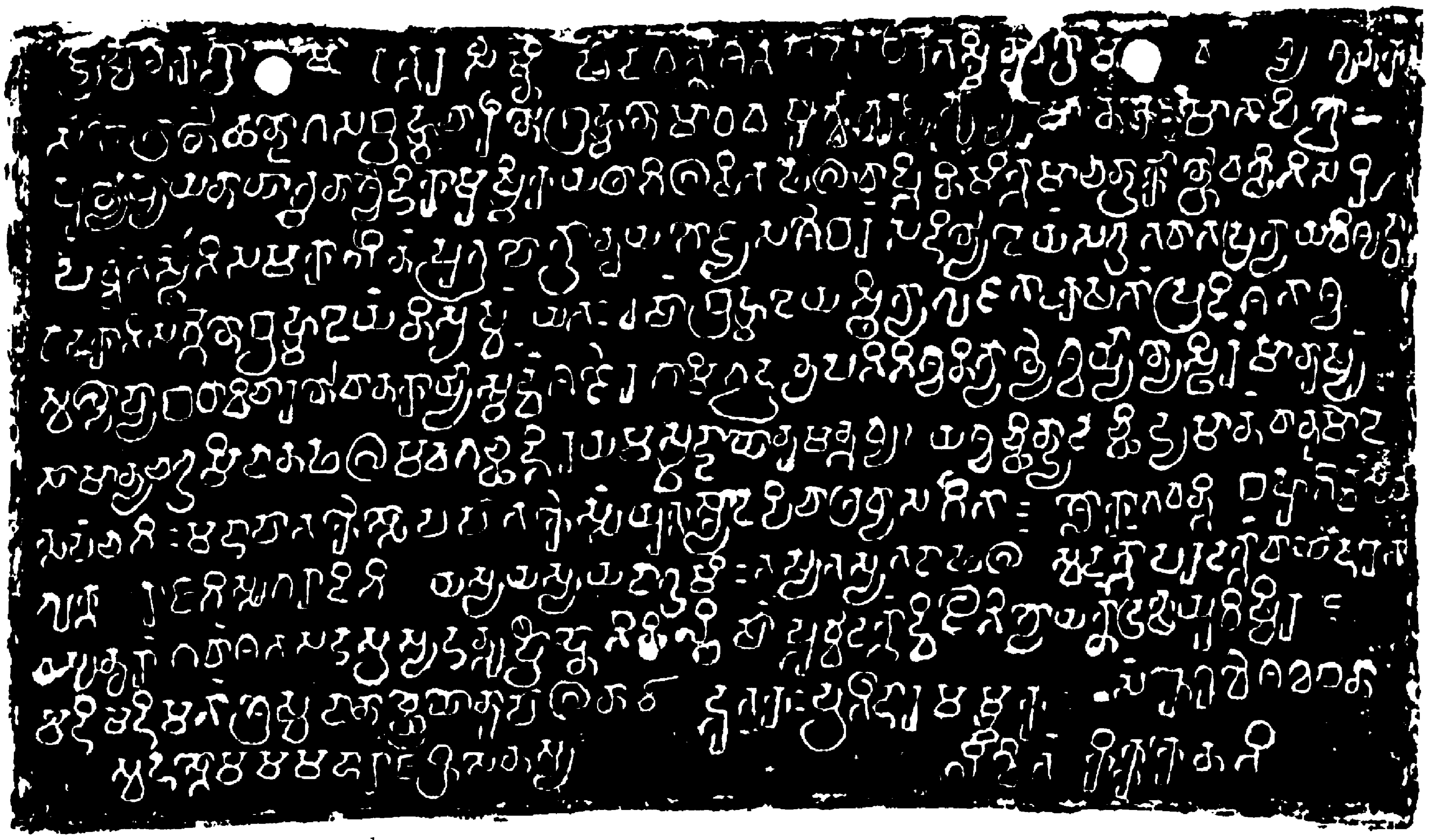
[7] The construction of line 14 is somewhat confused; it is not clear who the donee was, or who, at the time of the grant, was in possession of the land which is the object of the grant. As it stands, the text does not make any sense; my rendering is conjectural.

Two Palitana Grants of Dhruvasena [I].

A i.



A ii.

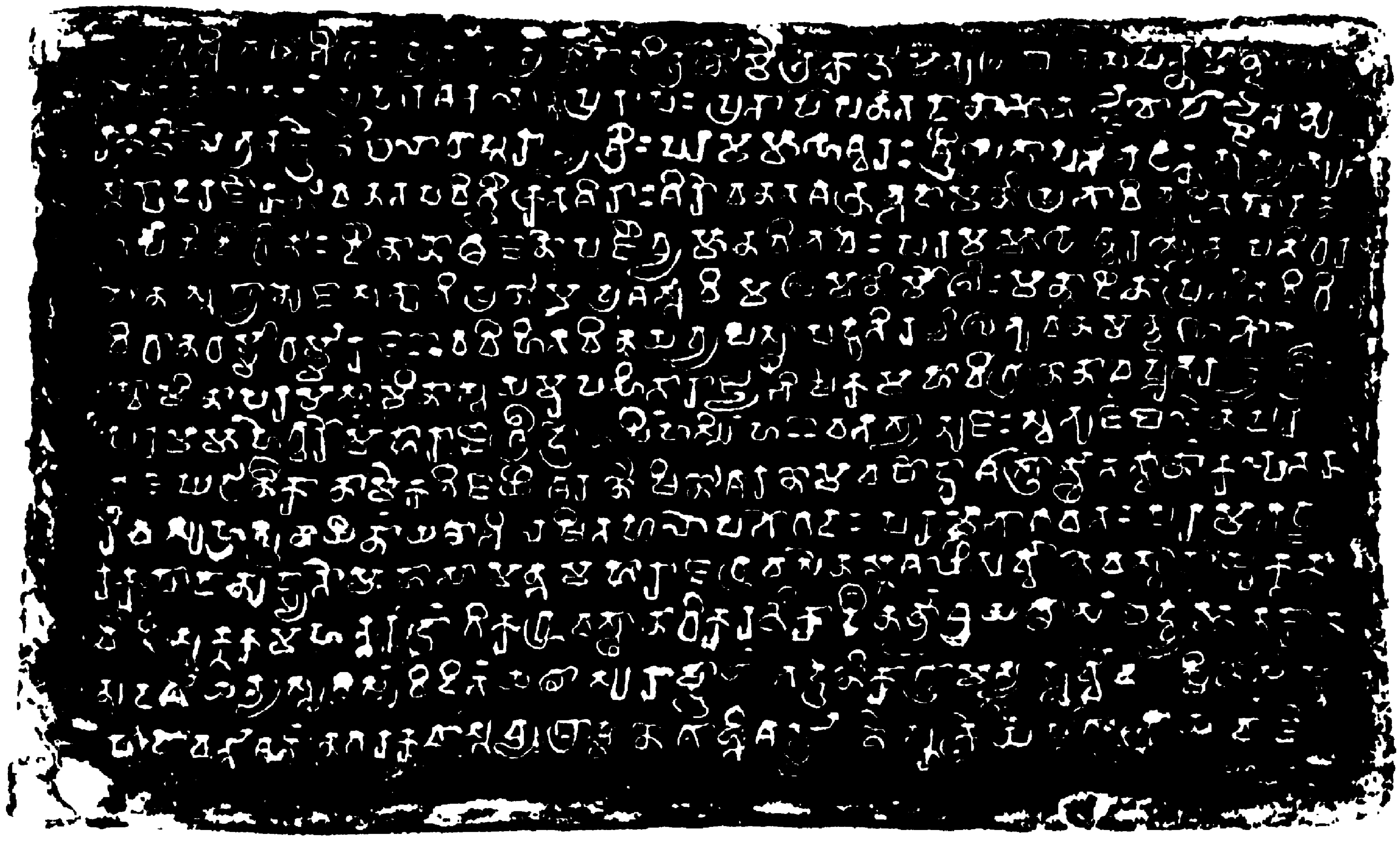


F. W. THOMAS

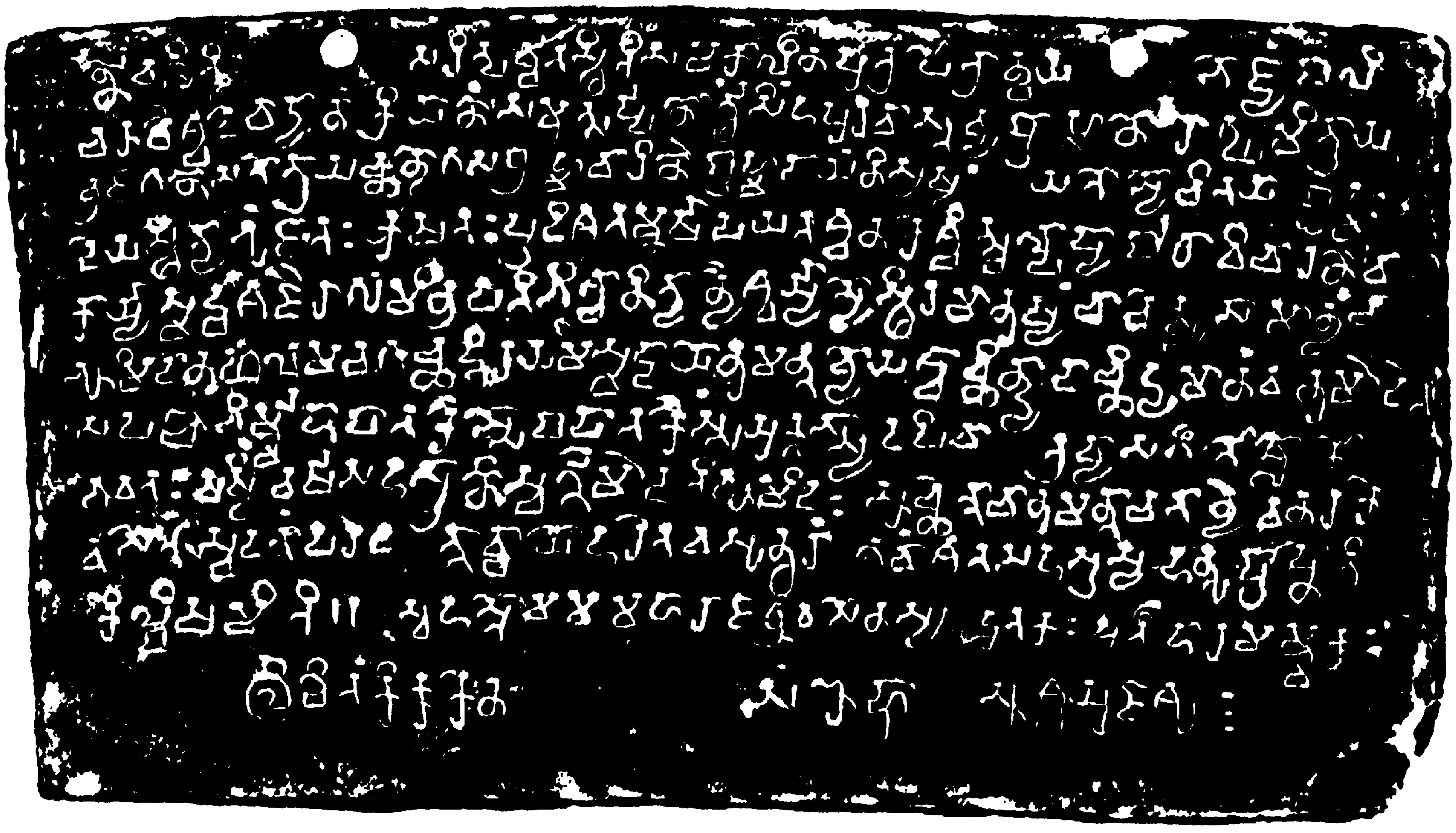
SCALE ONE-HALF

WHITTINGHAM & GRIGGS, PHOTO-LITH

B.



Kathiawad Plate of Dhruvasena [I]: Samvat 206.



SCALE ONE-HALF

edges are just slightly raised, in order to protect the writing, which is in a state of excellent preservation throughout. The letters, which are deeply incised, show through on the reverse side of the plate. The engraving is well executed. The plate has a pair of holes bored at two adjacent corners and intended for receiving the ring and seal, which are missing. Its weight is 56 *tōlas*. It contains fifteen lines of writing. The letters are of the period to which the plate refers itself, and of the type met with on other plates of the Maitraka dynasty. In short, this record is exactly like any of the large number of grants of Dhruvasēna I. that have latterly been brought to light. A detailed description of the characters, language and orthography of these plates, or even an English rendering of the text, seems superfluous. We may take it for granted that the *dūtaka* of this grant was the *pratīhāra* Mammaka, and the writer Kikkaka.

The grant was issued from Valabhī by the *Mahāsāmanta Mahārāja* **Dhruvasēna** [I.] to the Brāhmaṇa Śāntiśarman of the Ātrēya *gōtra*, [a student of] the Vāji[sanēya] School and a resident of Nagaraka, either bestowing upon him or confirming him in the possession of one hundred *pādāvarttas* of land on the south-eastern boundary of the village of Bhadrēṇikā, situated in Surāshṭrā.

I am unable to identify Bhadrēṇikā. **Nagaraka** is probably Vaḍnagar, the home of the Nāgar Brāhmans.

TEXT.[1]

Plate B.

12 . . . [2]महासामन्तमहाराजध्रुवसेनकुशली सर्व्वानेव स्वानायुक्तक-
13 विनियुक्तकमहत्तरद्रांगिकध्रुवस्थानाधिकरणिकादीनन्यांश्च यथासंबध्यमानकान-
14 नुदर्श्ययत्यस्तु वस्संविदितं यथा सुराष्ट्रायां भद्रेणिकाग्रामस्य पूर्व्वदक्षिण-
सिम्नि[3],
15 पादावर्त्तशतं नगरकवास्तव्यब्राह्मणशान्तिशर्म्मणे आत्रेयसगोत्राय वाजि[4]-

POSTSCRIPT.

A PLATE OF DHRUVASENA DATED SAM. 206.

Since writing the above I have come across a new Valabhī plate containing the concluding portion of a grant of Dhruvasēna dated in *saṁ.* 206, about which I should like to add a few words in continuation of the above note on the Bhavnagar plates. This new plate was placed in my hands for decipherment by Mr. J. C. Chatterjee, Dharmādhyaksha (Secretary in the Ecclesiastical Department) to the Government of His Highness the Gaikwar of Baroda. It was sent to him, he told me, officially from Kathiawad for decipherment: that is all that I could elicit from him regarding its previous history. The plate is $11\frac{1}{4}$ inches long by $6\frac{1}{2}$ inches broad; the edges are raised to protect the writing, which is in a state of perfect preservation; and the characters belong to the period to which the plate refers itself: in one word, the grant is similar in every respect to the records of the Valabhī kings that have hitherto come to light.

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1 From the original plate, and a set of estampages.

2 Up to this the text is practically identical with the text of the Pālitānā Plate of Dhruvasēna I. (dated 206), published above, Vol. XI, pp. 105 ff. In l. 6, read °*t-pād-âbhipraṇāma*° for °*t-pābhipraṇāma*°; and *Manvādinā* for °*dinā*.

3 Read °सीम्नि.

4 The rest of the inscription is missing

The inscription is one of *Mahārāja* **Dhruvasēna [I.]** and records the grant of a village (of which the name must have occurred in the missing portion of the grant and is therefore now lost) to a Brāhmaṇa named **Rotghamitra** of the Vrajagaṇa *gōtra*, a student of the Chhandōga School, and resident of **Siṁhapura**, for the maintenance of certain sacrifices. The grant is dated **saṁ. 200 6, Āśvina śukla 3.** The *saṁvat* year, when referred to the Valabhī era, yields A.D. (206 + 319) 525. The *dūtaka* was **Mammaka**, and the writer **Kikkaka**, as usual.

The only point worthy of notice in this grant is the village-name **Siṁhapura**, which is mentioned in it as the residence of the grantee. It is tempting to identify it with Sīhōr in the east of the Kathiawad peninsula, a junction on the Bhavanagar-Wadhwan Railway, not far from Valā, the ancient Valabhī.

[KATHIAWAD PLATE OF DHRUVASENA [I.].]

TEXT.[1]

1 rṇṇava-kshiti-sarit-parvvata-sthiti-samakālīnaṁ putra-pautr-ānvaya-bhōjyaṁ bali-

2 charu-vaiśvadēv-ādyānāṁ kriyāṇāṁ samutsarppaṇ-ārtthaṁ **Siṁhapura**-vāstavya-brāhmaṇa-**Rōtghamitrāya**

3 Vrajagaṇa-sa-gōtrāya (Ch)Chhandōga-sa-brahmachāriṇō brahma-dāyaṁ nisṛishṭaṁ [|*] yatō=sy=ōchitayā brahma-

4 dēya-sthityā bhuṁjataḥ kṛishataḥ pradiśataḥ=karshāpayataś=cha na kaiś=chit=svalp-āpy=ābādhā vichāraṇā vā

5 käryy=āsmad-vaṁśajair=āguṁmi[2]-nṛipatibhiś=ch=ānityāny=aiśvairyyāṇy=asthiraṁ mānushyaṁ ch=āvēkshya sāmānyaṁ cha

6 bhūmi-dāna-phalam=avagachchhadbhir=ayam=asmad-dāyō=numantavyō yaś=ch=āchchhindyād=āchchhidyamānaṁ v=ānumōdēt

7 sa pañchabhir=mmahā-pātakais=s-opapātakais=saṁyuktas=syād=api ch=ātra **Vyāsa-gītau** ślōkau

8 bhavataḥ [|*] shashṭiṁ[*] varsha-sahasrāṇi svarggē mōdati bhūmidaḥ[|*] āchchhettā ch=ānumantā cha tāny=ēva narakē

9 vasēt [||1*] sva-dattāṁ para-dattā[ṁ*]=vvā yō harēta vasundharāṁ [|*] gavāṁ śata-sahasrasya hantu[ḥ*] prāpnōti

10 kilbisham[||2*]=iti sva-hastō mama mahārāja-**Dhruvasēnasya** [||*] dūtakaḥ pratīhāra-**Mammakaḥ** [||*]

11 likhitaṁ **Kikkakena** [||*] **saṁ 200 6 Āśvayuja śu 3** [||*]

No. 8.—SRIRANGAM COPPER-PLATE GRANT OF DEVARAYA II; SAKA 1349 (1350).

BY THE LATE T. A. GOPINATHA RAO, M.A., TRIVANDRUM.

The temple of Śrī-Raṅganātha at Śrīraṅgam possesses, among others, two sets of **copper-plates** belonging to the reign of the Vijayanagara king Dēvarāya II. The inscriptions engraved upon these two sets are edited below from the impressions prepared under my supervision.

No. I. ŚAKA-SAMVAT 1349.

This set consists of three plates (size 10⅜ × 6½ in.), of which the first and the third bear writing on one face only, namely, the second side of the first and the first side of the third.

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[1] From the original plate and a set of impressions.

[2] [Read *āgami.*—Ed.]

The inscription is in good state of preservation. The alphabet in which the record is written is **Nandināgarī**, and the language partly **Sanskṛit** and partly **Kannaḍa**. The first section covers 41, and the second 34 lines, and the remaining portion contains the usual admonitory and imprecatory verses. At the end appears, as is usual with the documents of the kings of the first dynasty of Vijayanagara, the word *Śrī-Virūpāksha*, the sign-manual of the king, written in the Telugu-Kannaḍa alphabet. The same sort of mistakes, careless execution of the engraving, leaving room for a number of corrections, erasures, interlineations, etc., and other faults common to the other grants of this period are to be found in these two sets of copper-plates also; there is no necessity for them to be noticed in detail here; they are noted in the foot-notes at the appropriate places.

The record is dated **Śaka 1349**, which is expressed by the **chronogram** *dhivalōka*; this year corresponded to the cyclic year **Plavaṅga**. In the Kannaḍa portion the Śaka year is given as 1350, and the same Plavaṅga is said to be current. On a **Sunday**, which was the **Utthāna-dvādaśī** *tithi* in the **bright** half of the month **Kārttika**, the king **Dēva-Rāya II** granted to the God **Raṅganātha** of **Śrīraṅgam** the village of **Pāṇḍamaṅgalam** together with the sub-villages, **Tirunalūr, Sēranaibaṇḍa-perumā-nallūr,** and **Sunepuha-nalūr**, in the name and for the merit of his mother **Nārāyaṇāmbikā**. The genealogy of the king is traced thus :—

Saṅgama
|
His middle son
Bukka I
md. Gaurāmbikā
|
Hariharēśvara
|
Pratāpa-dēva-Rāya I
md. Dēmāmbikā
|
Vijaya-Bhūpati
md. Nārāyaṇāmbikā
|
Dēva-Rāya II

Dēva-Rāya II bears the *birudas*, *Rāj-ādhirāja*, *Rāja-param-ēśvara*, *Bhāsh-ātilaṅghi-bhūpāla-bhujaṅga* (=*Bhāshege-tappuva-rāyara-gaṇḍa*), *Mūru-rāyara-gaṇḍa* and *Hindu-rāya-suratrāṇa.* Having ascended his ancestral throne and while protecting the kingdom, residing in his capital **Vijayanagara**, which is situated on the bank of the river **Tuṅgabhadrā**, king Dēva-Rāya made the grant mentioned above in the presence of the god **Virūpāksha** on the bank of the Tuṅgabhadrā. The villages Pāṇḍamaṅgalam, Tirunalūr and Sēranaibaṇḍa-perumā-nallūr are said to have been situated in the **Rājagambhīra** *vaḷanāḍu* on the south side of the river **Kāvērī**; and Sunepuha-nalūr in the **Mēlmuṟi** of the **Maḷa** *nāḍu*, a sub-division of the **Rājarāja** *vaḷanāḍu*, on the north of the same river. The Kannaḍa portion adds that the villages belonged to the Amarada *hōbaḷi*. All of them belonged also to the **Tiruchchirāppaḷḷi** *rājya* or *chāvaḍi*. The purpose for which the grant is made is given in full detail in the Kannaḍa portion. From the income of the villages twelve perpetual lamps should be burned, flower-garlands dedicated and one festival celebrated. The grant was made as an auxiliary to the *Gō-sahasra Mahādāna* performed by the king. The grant was ordered to be executed from the first *tithi* of the bright fortnight of the month **Āshāḍha**. The income from the villages situated on the south of the Kāvērī was 1403 coins (*kuḷa-gadyāṇa*), and that from the village on the north of the river 420; total 1,82

gadyāṇas. A number of taxes leviable in these villages are included in the grant: they are taxes on the *naṉśey*, *puṉśey*, *pūm-payir*, *vāśal-* and *maṉai-ppēṟu-kaḍamai*, *taṟi-kkaḍamai*, *māvaḍai*, *maravaḍai*, *kuḷavaḍai*, *kalāyam*, *tirigai-āyam*, *pēr-kaḍamai* (*taṟi-kaḍamai*), *āḷukku-nīr-pāṭṭam*, *mahamai*, *kaṭṭigai-avasaram*, *paṭai-kāṇikkai*, *Āḍi-Kārttigai-pachchai*, and all old and new taxes. Several of these have remained unexplained up till now. It is easy to understand the nature of the first four; they are levied on wet and dry cultivation, on inferior crops, on houses and compounds and on looms; *māvaḍai*, *maravaḍai* and *kuḷavaḍai* are taxes on animals, trees and tanks: that is, perhaps, when animals are sold in markets; on fruit-bearing trees and for fishing in tanks. *Kalāyam* literally means tax on stone; it is very likely a tax payable for quarrying stones from hills; what tax is meant by *tirigai-āyam* is not known. *Pēṟ-kaḍamai* means taxes on persons, a sort of poll-tax evidently. *Āḷukku-nīr-pāṭṭam* is a tax for maintaining the person appointed for making regular supply of water to the fields: this appears to be the same as *nīrāṇikkam*. *Magamai* is a corrupt form of *magaṉmai*, the nature of being a son to another; this levy is still in force among certain merchants in the Tanjore and Trichinopoly districts. On all sales and purchases the merchants collect a small, but fixed, sum and utilize the money thus collected for some public purpose. Compare similar words, as *kōyiṉmai* corrupted into *kōyma*, *ūrāṇma*, etc. *Kaṭṭigai-avasaram* appears to be some sort of tax on fire-wood; and *paṭai* (*paḍai*)-*kkāṇikkai* is the contribution to be made for the maintenance of the army. *Pachchai* means a *kāṇikkai*, a *nazar*, a present on important occasions. In this sense the word is employed in contemporary literature; for instance, in *Śrī-vachana-bhūshaṇam*, I, 33 and 34. Such *kāṇikkais* seem to be given in the months of *Āḍi* and *Kārttigai*.

The following places and rivers are mentioned in the inscription:—**Tuṅgabhadrā, Vijayanagara, Tiruchchirāppaḷḷi, Kāvērī, Rājagambhīra** *vaḷanāḍu*, **Pāṇḍa-maṅgalam, Tirunalūr, Śēranaibaṇḍa-perumā-nallūr, Rājarāja** *vaḷanāḍu*, **Mēlmuṟi of the Maḷa** *nāḍu* and **Śunepuha-nalūr.** Of these the Tuṅgabhadrā and the Kāvērī are the well-known rivers of South India. Tiruchchirāppaḷḷi is the modern town of Trichinopoly, the head-quarters of the district of the same name. The part of the country immediately to the south of the river Kāvērī was known to medieval inscriptions as the Rājagambhīra *vaḷanāḍu*, and that on the north of the same as the Rājarāja *vaḷanāḍu*. Maḷa *nāḍu* is a sub-division of this territory and has given its name to a section of the Tamiḻ Brāhmaṇas, *i.e.* the Bṛihach-charaṇa community of Maḷa *nāḍu*. Vijayanagara, the capital of the famous Hindu kings of Southern India, is the modern Hampe on the Tuṅgabhadrā. Pāṇḍa-maṅgalam is a village a mile and a half west of Trichinopoly; this and Tirunalūr are in the Trichinopoly *Tālūk*; the correct form of the name Śēranaibaṇḍa-perumā-nallūr is Śōraṇai-veṉṟa-perumāḷ-nallūr. There is a village some distance south of Pāṇḍa-maṅgalam called Vēndarāya-nallūr. This is perhaps the same. Śuṉepuha-nalūr is situated at a distance of seven and a half miles to the north-west of Trichinopoly.

TEXT.[1]

[Metres: vv. 1-25, *Anushṭubh*, and v. 26, *Śālinī*.]

First Plate: Second Side.

1 श्रीगणाधिपतये नम: [॥*] नम(:))स्ते [॥*] नम(:)स्ते [॥*] नम(:)स्तुगशि

2 रचुबि[2]चंद्रचाम[र*][चा]रवे [।*] त्रैलोक्यनगरारंभमूल-

[1] From impressions prepared under my supervision.

[2] Read °श्चुम्बि।श्चुंबि.

3 स्तंभाय संभवे[1] (तु) ।[। 1*] भू[य*]स्त्रै[2] भवतां भूतै[3] भूयादाच्छयं-[4]
4 कुंजर:[।*] घाडुविंद्वारकांतार ष[1*][5]गमाव्यस्व [यो]-
5 गिन: ।[। 2*] क्षेमं व: प्रचुरीकुर्यात्क्षोणीमभ्युद्दहंनयं[6][।*] [क्रो]-
6 डाकृतेरभूच्यस्य क्रीडापल्व[ल]मंबुधि[7][:॥ 3*] अस्ति क्षीरा[र्ण]-
7 वोद्भूतमपां पु[ष्य]मनुत्तमं[8] । अम्लानदं निर्माल्यमाध-[9]
8 त्ते शिरसीश्वर: [॥ 4*] सदामोदनिधेस्तस्य संतानेयद्र[सं]-[10]
9 [श्रि]ते [।*] अभूदाश्चर्यम[ा]धुर्यं वसुधायास्तप:फलं [॥ 5*]
10 संगमो नाम रा[जा]भू[त्सा]रभूते तदन्वये [।*] रेजे यस्य
11 यश:शिंधौ:[11] सर[णी]व सुरापगा [॥ 6*] सर्वरत्ननि[धे]-
12 स्तस्य संम्राडासीत्तनूभुवं[12] । मध्ये बुक्कमहोपालो म-
13 णीनामिव कौस्तुभ: [॥ 7*] तस्य गौरांबिकाजानेस्त(नयो वि)-
14 नयोभूद्गुणो[13]न्नत: [।*] [हा]रगौरयश:पु[14]रहरिहरिह[रे]-
15 श्वर: [॥ 8*] [15]यषोडशमहादानयशसां दिग्विहारिणां [।*] भूय[सा]-
16 मभवंनालं[16] भुवनानि चतुर्दश [॥ 9*] प्रतापदेवरायाख्य:
17 पुत्रोभू[द्भू][17]वि विश्रुत: [।*] प्रमोद इव मूर्त्तो य: प्रजानां स्वैर्गु-
18 णैर[भु][18]त् [॥ 10*] प्रत्य[र्थि]समिधो हुत्वा प्रतापाग्नौ रणांकणे [।*][19]
19 विजितो येन(।) वीरेण विजयश्रीकरग्रह: [॥ 11*] तस्य दे-
20 मांबिकाजानेस्तनयो विनयोन्नत: [।*] विद्यानिधि-
21 र्विशेषज्ञो वीरो विजयभूपति: [॥ 12*] दयानिधेर[भू]-
22 त्तस्य देवीनारायणांबिका [।*] शौरेरिव महालक्ष्मी: शं-
23 [क]रस्येव पार्वती [॥ 13*] पुत्ररूपं तयो [:*] स्सादयं पु[20]र्वजन्म त-

Second Plate : First Side.

24 प:फलं [।*] देवरायमहीपालो दाता दीव्यति भूतले [॥ 14*]
25 विक्रमे विक्रम[ा*]दित्यं भोगे भोजमिवापरं [।*] राजराजं वि-

[1] Read शं°.
[2] Read भूयस्यै.
[3] Read भूत्यै.
[4] Read °दाश्चर्य.
[5] Read कान्तारमा°.
[6] Read °द्धन्नयम्.
[7] Read °मम्बुधि:
[8] Read °मम्.
[9] Read अम्लान यदनिर्माल्य°.
[10] Read सन्तानं यदुसंश्रितम्.
[11] Read यश: सिन्धौ:
[12] Read साम्राडासीत्तनूभवाम्.
[13] Read णो.
[14] Read पू.
[15] Read यत्षोडश°.
[16] Read °मकालं.
[17] Read °द्भु.
[18] Read °भू.
[19] Read रणाङ्गणे.
[20] Read पू.

26 तरणे राजानं यं प्रचक्षते [॥ 15*] अभंगमंगकालिंगवंगाद्या-
27 स्सामरादिभिः [।*] राजानो यं निषेवंते[1] राजचिह्नैः स्वयं[वृ]-
28 तैः [॥ 16*] राजाधिराज(:)स्तेजस्वी यो राजपरमे[श्व]रः [।*] भाषाति-
29 लंघिभूपालभुजंगविं[ड]बनः[2] [॥ 17*] मूरुरायरगंडाकः[3]
30 परराजभयंकरः [।*] हिंदूराय[सु]रत्राणो[4] वंदिवर्गेण वं-[5]
31 द्यंते [॥ 18*] श्रीतुंगभद्रापरिषे नगरे विजयाह्वये [।*] दिव्यं
32 सिंहासनं प्राप्य पालयन्पृ[थि]वीत्ति[6]मां [॥ 19*] पुंण्य[7]श्चे[ा*]त्ता-
33 ग्रगं[ण्यो][8]सौ देवरायमहीपतिः[।*] धिवक्षीवि सकाब्दा-[9]
34 [ब्दे] प्र[वंगा]ख्य[वत्स[10]रे] [॥ 20*] का[ा]र्त्तिके मासि सुंधायां[11] द्वाद[श्या]-
35 मार्कवासये[12] [।*] तुंगभद्रानदीतो[रे] श्रीविरूपाक्षसंनि-
36 [धौ] [॥ 21*] चि[सि]रापल्लिरा[ज्ये] राजगंभीरवल्लभिदे[13] कावेरिय-
37 दक्षिणे पाडमंगलना[म*] [द्व]लुभौ तिरुमलूरपि[14] सेरनैवेड-
38 पेरुमानलूरपि उत्तरेयात्त्र्यकांग्यायां[15] राजराजवल्लभि-
39 धे प्रह्वजपदे सुनेपुल्लनलुरधा उभौ श्रीरंगराजस्य परि-
40 यार्थं [16]नारायणवभिध[ा*]नतः श्रीनेव[17] देवराजेन दत्तं श्रीव-
41 र्णांबुधारया[18] ॥ स्वस्ति श्री जयाभ्युदाय शिकवर्ष[19] १३५० प्रवं-
42 गसंवत्स[20]रद कार्तिकसुध उत्तानुद्व[ा*]दशि[21]पुण्यकालद
43 श्रीमं[22]न्महाराजाधिराजपरमेश्व[23]र श्रीवीरप्रतापदे-
44 वरायमहारायरु श्रीरंगनाथदेवरिगे नारायणसेवो-
45 चे[ा*]वगल हेसरलि चोंदु पबसरव नहसुव कद्दवे[24] दिन
46 [चों]दवे[25] हबेरडु परिवाणनंदादीविगेवणमोलि चों-

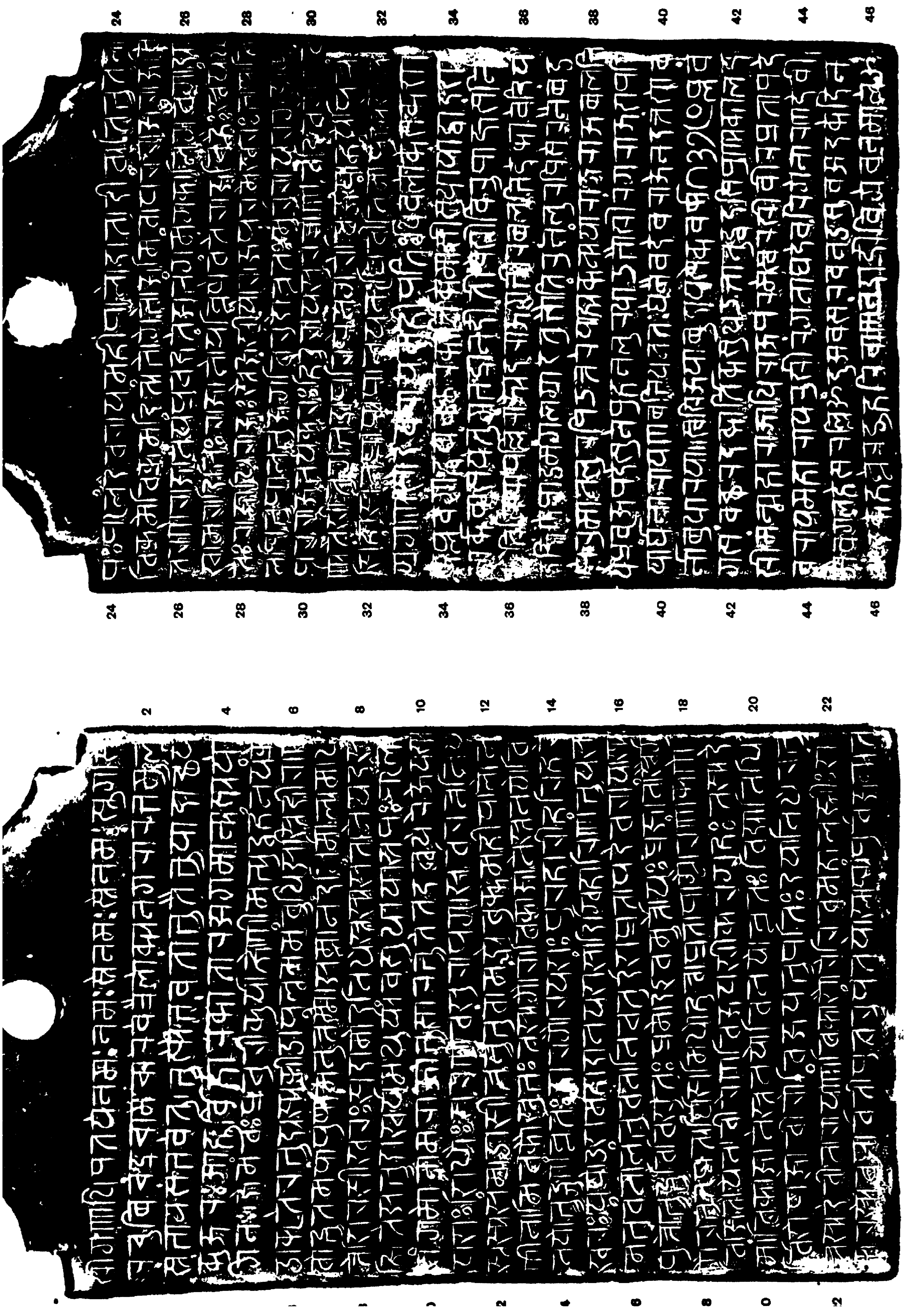
Second Plate: Second Side.

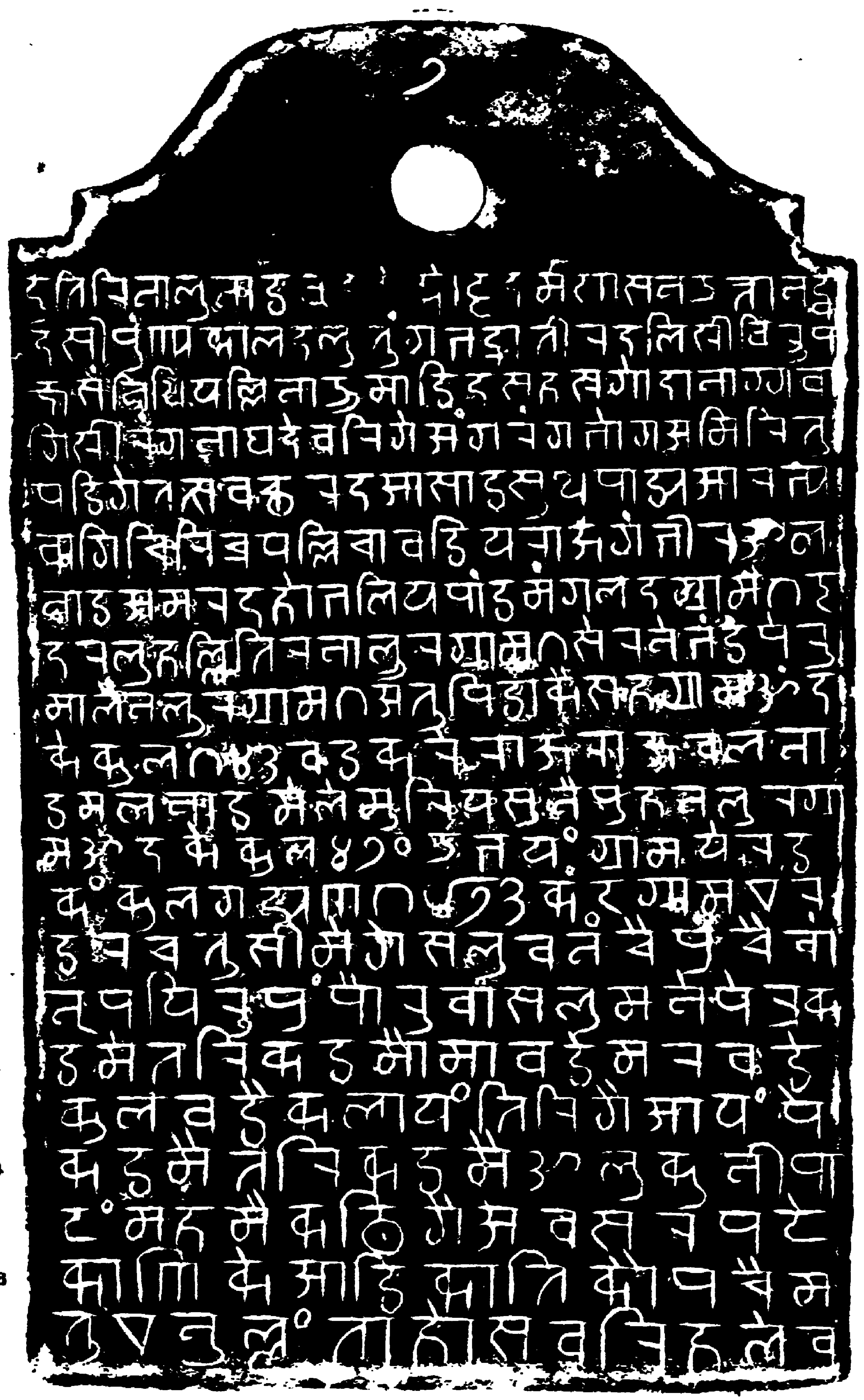
47 दु तिरुनालु न(ा)डवुद्दके[24] वोह दमंस्राशन[26] [।*] उत्तानद्व[21][ा]-

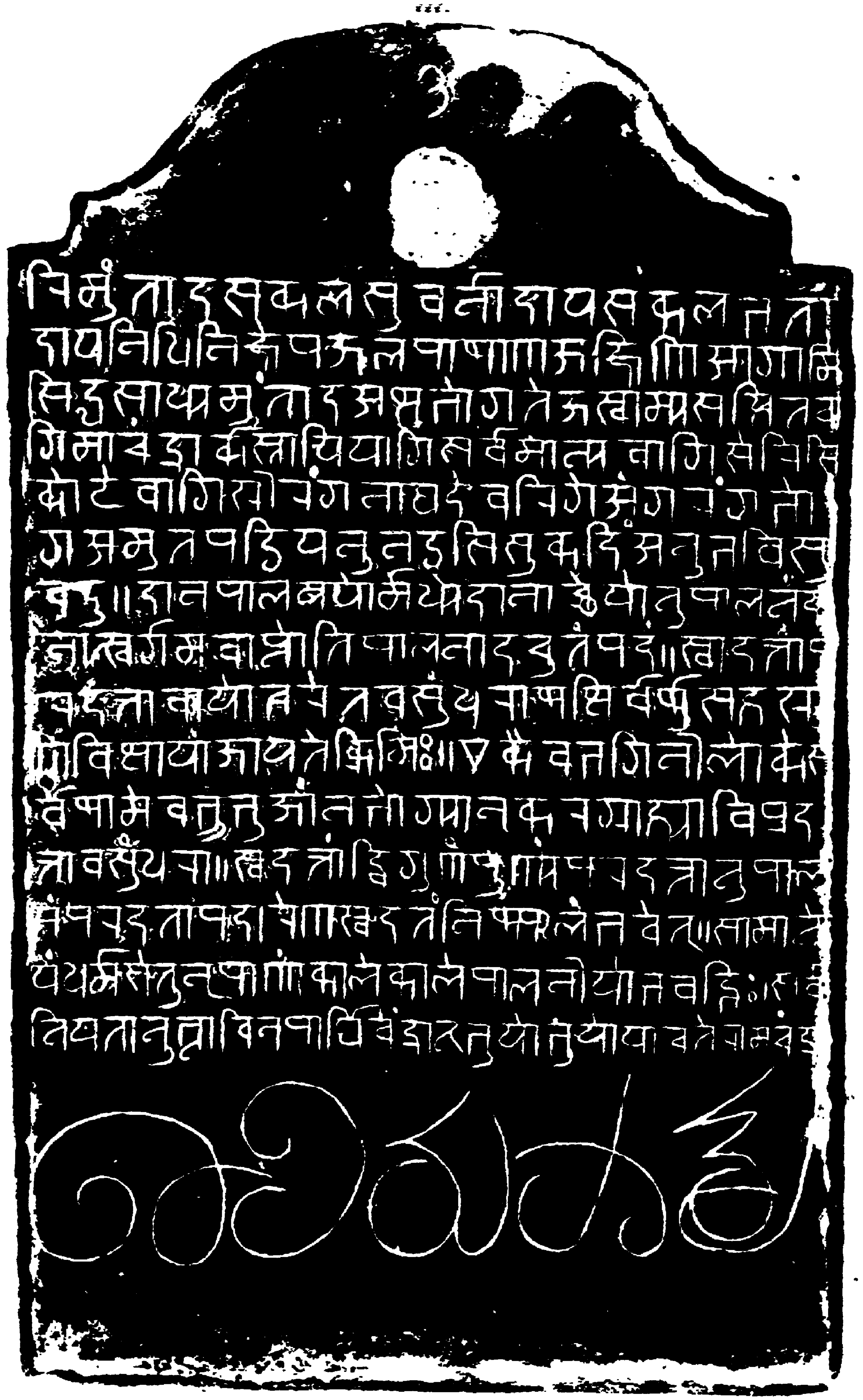
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[1] Read निषेवन्ते.
[2] Read भुजङ्गविडम्बनः.
[3] Read °गण्डाङ्कः.
[4] Read हिन्दु°.
[5] Read -द्य.
[6] Read °मि.
[7] Read पुण्य.
[8] Read °गण्यो.
[9] Read शकेऽब्दे.
[10] Read त्स.
[11] Read शुक्लायां.
[12] Read ई.
[13] Read राजगम्भीरवल्लभिधकावेर्या.
[14] Read पाण्डमङ्गलनामग्रामयुग्मौ-.
[15] Read मण्डकन्यायां.
[16] Read श्रीरङ्गराजस्य परिचर्यार्थं.
[17] Read °नाम्नाभिधस्मतः श्रीनैव.
[18] Read स्वर्णाम्बुधारया.
[19] Read जयाभ्युदयशक.
[20] Read त्स.
[21] Read उत्थानद्वादशी.
[22] Read न्म.
[23] Read श्व.
[24] Read °वुदक्के.
[25] Read चान्दक्के
[26] Read धर्म°.

Srirangam Copper-plate of Devaraya II : Saka-Samvat 1349 (1350).







48 दसोपुंख[1]कालदलु तुंगभद्रातीरदलि श्रीविरूप[ा]-
49 क्षसंनिधियलि नाल[2] माडिद सहस्रगोदानागव[ा]-[3]
50 गि श्रीरंगनाथदेवरिगे अंगरंगभोग अमिरितु-
51 पडिगे तरसकच्छरद आसाड सुध पाद्य[4] आरभ्य-
52 वागि चिरिप्र[5]पलिबावडिय राजगंभीर चौळ
53 नाड अमरदलोभलिय पांडमंगलद ग्राम १ इ-
54 दरलुहलि तिरमालूर ग्राम १ सेरनैभंडपेल-
55 मालैनलूर[6] ग्राम १ अतु[7] पिडावैसड ग्राम आंद-
56 के कुल १४०३ [।*] वडकार[8] राजराजवळना-
57 ड मलनाड मेलिमुरिय सुनैपुहनलुर ग्रा-
58 म आंदके[9] कुल ४२० [।*] उभय(:)ग्रामयेरड-
59 कं कुळगद्य[ा*]ण १८२३ [।*] कंदग्राम एर-
60 डर अतुलोमेमै सलुव नंचे पुंचे वा-
61 नपयिर पुंपौर वांसलुमनेपेरक-
62 डमे[10] तरिकडमौ[11] मावडे मरवडे
63 कुळवडे कलार्य तिरिगै आयं पे-
64 कडमे[12] तरिकडमै आेलुकुनोपा-
65 ट मलमै काठिगै अवसर पटे-[13]
66 कालिये अडिकातिको(ा)पचै म-
67 तु[14] एनुमंता होसवरि[15] हलेव-

Third Plate: First Side.

68 रि मुंताद सकल सुवर्नादाय सकलभता-[16]
69 दाय निधिनिक्षेपजलपाषाण अक्षिणि आगामि
70 सिद्धसाध्य मुंताद अष्टभोगतेज[:*]स्वाम्यस[हि]तव[ा]-
71 गिमाचंद्रार्क स्ता[17]यियागि सर्वमान्यवागि सेरिसि
72 कोटेवागि श्रीरंगनाथदेवरिगे अंगरंगभो-
73 ग अमृतपडियनु नडसि सुखदि अनुभविसु-
74 वदु ॥ दानपालनयोर्मध्ये[18] दानाच्छ्रेयोनुपालनं [।*] दा-

[1] Read पुष्य.
[2] Read मातु.
[3] Read °नाथवागि.
[4] Read तारसंवत्सरद आषाढशुद्ध पाड्यमि.
[5] Read तिरुचिरापलि.
[6] Read शेरनैवेन्रपेरुमाळनल्लूर.
[7] Read अन्तु.
[8] Read वडकरै.
[9] Read आन्दकै.
[10] Read पुनपयिर् वासलुमनेपेरकडमै.
[11] Read कडमै.
[12] Read पेर्कडमै. This and *tari-kaḍamai* are repeated unnecessarily.
[13] Read टे.
[14] Read °कालियके पच मतु.
[15] Read होसवरि.
[16] Read ता.
[17] Read स्था.
[18] The letter न in पालन looks like ल.

75 नात्स्वर्गमवाप्नोति पालनादच्यु[1]तं पदं ॥ [22*] स्वदत्तां [प]-
76 रदंत्ता[2] वा यो हरेत वसुंधरा[म् ।*] षष्टिवर्षसह[स्रा]-[3]
77 णि विष्टा[4]यां जायते क्रिमि:[5] ॥ [23*] एकैव भगिनी लोके स-
78 र्वेषामेव भूभुजां [।*] न भोग्या न करग्राह्या विप्रद-
79 त्ता वसुंधरा ॥[24*] स्वदत्तांद्वि[6]गुणं पुण्यं परदत्तानुपाल-
80 नं [।*] परदत्तापदारेण[7] स्वदत्तं[8] निष्फलं भवेत् ॥[25*] सामान्यो-
81 यं धर्मसेतु नृ[9]पाणां काले काले पालनीयो भवद्भि: । सर्वा-
82 नियतानु[10]न्नाविन[:*] पार्थिवेंद्रान् भुयो भुयो[11] याचते रामचंद्र[:॥26*]
83 श्रीविरूपाक्ष[12]

ABSTRACT OF CONTENTS.

Verse 1. Adoration to Śambhu (Śiva).

V. 2. Adoration to Gaṇēśa.

V. 3. Adoration to Varāha.

Vv. 4-5. On earth, as the fruit of its *tapas*, was born **Yadu** in the family of the Moon, which came out of the ocean of milk and is worn by Śiva on his head.

Vv. 6-7. In his race was born a king named **Saṅgama**. His middle son was **Bukka**, who resembled the jewel *kaustabha* among other jewels.

Vv. 8-9. To him by **Gaurāmbikā** was born a son, named **Harihara**, who was gentle and famous. Thê renown of his making the sixteen great gifts (*mahādāna*) redounded even beyond the fourteen worlds.

Vv. 10-12. His son was **Pratāpa-dēva-Rāya**, who appeared the embodiment of the happiness of his subjects. He conquered his enemies in battles by the prowess of his arms and obtained the favour of Vijaya-Lakshmī (goddess of Victory). To him, as husband of **Dēmāmbikā**, was born the prince **Vijaya-Bhūpati**.

Vv. 13-18. The queen of **Vijaya-Bhūpati** was **Nārāyaṇāmbikā**. As the fruit of the meritorious acts done by them in their previous birth, **Dēva-Rāya** was born to Vijaya-Bhūpati and Nārāyaṇāmbikā and distinguished himself on earth. He is compared to Vikramāditya in valour, to Bhōja in his *bhōga* (?) and to Rāja-rāja (*i.e.* Kubēra) in his munificence. The kings of the Aṅga, Kaliṅga, Vaṅga, etc., countries did homage to this king, holding *chāmaras* and other royal insignia in their hands. He bore the *birudas* Rāj-ādhirāja, Rāja-param-ēśvara, Bhāsh-ātilaṅghi-bhūpāla-bhujaṅga, Mūru-rāyara-gaṇḍa, Para-rāja-bhayaṅkara and Hindu-rāya-suratrāṇa.

V. 19 to the end of line 41. **Dēva-Rāya**, who, seated on his ancestral throne in Vijayanagara, which has the Tuṅgabhadrā as its ditch, ruled the earth, made the grant of the villages of **Pāṇḍa-maṅgalam, Tirunālūr, Śēranaibaṇḍa-perumā-nalūr** and **Śunepaha-nalūr** to the god Raṅganātha. The gift was made in the Śaka year 1349, which is given by the chronogram *dhivalōka* and which corresponded to the (cyclic) **year Plavaṅga**, on a **Monday**

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[1] Read च्यु.
[2] Read दत्तां.
[3] Read षष्टिं° स्त्राणि.
[4] Read ष्ठा.
[5] Read क्रमि:
[6] Read °द्वि.
[7] [Read °हारेण—Ed.]
[8] Read °पहारेण स्वदत्तं.
[9] Read नृं.
[10] Read °नेतान् भाविन :
[11] Read भूयो भूयो.
[12] This line is written in Telugu-Kannaḍa characters.

the **twelfth** *tithi* of the **bright fortnight** in the **month Kārttika**, in the presence of the god Virūpāksha on the bank of the river Tuṅgabhadrā. The villages Pāṇḍa-maṅgalam, Tirunālūr and Sēranaibeṇḍa-perumā-nalūr are said to have been situated on the south bank of the river Kāvērī, in the **Rājagambhīra** *vaḷanāḍu*, belonging to the **Triśirāppalli** *rājya*, and Sunaipuha-nalūr in the **Rājarāja** *vaḷanāḍu* of the same *rājya*, but situated on the northern bank of the Kāvērī.

Lines 41-74. In the **Śaka year 1350, Plavaṅga**, on the auspicious occasion of the **Utthāna-dvādaśī** in the **bright half** of the **month Kārttika**, the king **Vīra-Pratāpa-deva-Rāya** Mahārāya gave the following *śāsana* (order) for performing one *avasara* consisting of twelve *harivāṇas* of perpetual lamps, garlands and one festival every day to the god Raṅganātha in the name of Nārāyaṇadēvī-auva : the gift of the villages of **Pāṇḍa-maṅgalam**, **Tirunālūr** and **Sēranaibaṇḍa-perumā-nalūr**, yielding 1,403 *kuḷa-gadyāṇas*, and **Sunepuha-nalūr**, yielding 420 *kuḷa-gadyāṇas*, was made for the *aṅga*, *raṅga*, etc., of the god Śrī-Raṅganātha, as an auxiliary to the *gō-sahasra mahādāna* made by the king on the auspicious occasion of Utthāna-dvādaśī in the presence of the god Virūpāksha on the bank of the river Tuṅgabhadrā. The villages **Pāṇḍa-maṅgalam**, **Tirunālūr** and **Sēranaibaṇḍa-perumā-nalūr** were in **Amarada** *hōbaḷi* of the **Rajagambhīra** *vaḷanāḍu* in the **Chirichrāpalli** *chāvaḍi*, whereas **Sunepuha-nalūr** was situated in the **Mēlamuṟi** of the **Maḷa** *nāḍu*, a sub-division of the **Rājarāja** *vaḷanāḍu* in **Vaḍagarai** (northern bank of the Kāvērī). These villages were to be enjoyed from the first *tithi* of the bright fortnight of the month Āshāḍha of the same year. The king granted these villages with the following rights of enjoyment : namely, the taxes on the lands under wet and dry cultivation, as also *vāṇ-payir* and *puṇ-payir*, the taxes called thev *āśal-*, *maṇai-pēṟu-kaḍamai*, *taṟikka-ḍamai*, *māvaḍai*, *maravaḍai*, *kuḷavaḍai*, *kal-āyam*, *tirigai-āyam*, *pēr-kkaḍamai*, *taṟikkaḍamai*, *āḷukunipāṭṭam*, *mahamai*, *kaṭṭige-avasara*, *paḍai-kāṇikkai*, *Āḍi-Kārttigai-pachchai* and all other new and old taxes, all income in gold and paddy and the eight kinds of enjoyment, *nidhi*, *nikshēpa*, etc.

Vv. 22-26. The usual admonitory and imprecatory verses.

Line 83 contains the words *Śrī-Virūpāksha*, the king's signature.

No. 9.—MOMIGATTI INSCRIPTION OF THE 49TH YEAR OF VIKRAMADITYA VI.

By Lionel D. Barnett.

Momigaṭṭi is a village in Dhārwār District, a few miles to the north-west of Dhārwār town, in lat. 15° 30½′ and long. 74° 59′, according to the Bombay Survey.[1] The present inscription, now published for the first time, was found in the local temple of Kalamēśvara, on the left side of the image. An ink-impression was prepared for the late Dr. Fleet, which is now in the British Museum ; from it I have edited the text. The stone has a rounded top decorated with sculptures, namely, in the centre a *liṅga*, on the proper right of which is a priest standing facing it, while another upright figure stands to the proper left, all three being in a shrine ; to the proper right of the priest, a cow and calf ; to the right of the latter, a scimitar ; in the opposite corner, a bull ; above these, the sun (on proper right) and moon (on left). Below this is the inscribed area, in two compartments : the first of these, comprising lines 1-2, is 2 ft. 3½ in. wide and 2¼ in. high, and the second, containing lines 3-30, is of the same width and 2 ft. 9 in. high.—The **character** is good Kanarese, of an upright rounded type that was beginning to come into use about the middle of the twelfth century. The height of the letters varies from ½ in. to ⅝ in. The *jh* (l. 9) and *ṅ* (ll. 19, 26) may be noted.—The **language** is Old Kanarese, with two

[1] The "Moemeegguttee" of the Indian Atlas seems to be intended for Momigaṭṭi ; but its position does not quite tally with that of the latter as given in the Survey.

formal Sanskrit verses (Nos. 1 and 5). The ancient *ḻ* has been changed to *ḷ* in *kūḷaṁ* (l. 14), *bēḷpa* (l. 16), *aḷidavarggey=* (l. 27), *sḷ-kōṭi* (l. 28), and to *r* in *garddey[u*]maṁ* (l. 22); it is falsely used for *r* in *toḍaḻd=* (l. 16). *P* is changed to *h* in *haḷḷi°* (ll. 19, 20), but elsewhere retained. Three words are of some lexical interest, viz. *tyāga-jaga-jhaṁpi jhaṁpaḷāchāryya* (l. 9), on which see above, Vol. XII, p. 251, and *nṛita* (l. 14), which is abstracted from the ordinary *sūnṛita*, and is parallel to *anṛitika*, " untruthful " in Aśvaghōsha's *Buddha-charita*, II. ii.

The **record,** after referring itself in ll. 2-4 to the reign of **Tribhuvanamalla (Vikramāditya VI),** introduces the **Kādamba** feudatory **Jayakēsi [II],** who is decorated with the characteristic titles of his dynasty, and his senior queen **Maiḷala-dēvi** (the daughter of Vikramāditya VI), as jointly reigning (ll. 4-13). On the historical points involved herein it suffices to refer the reader to Vol. XIV above, p. 299 f. Then follow verses in praise of **Vāmaśakti,** a Śaiva divine, and **Udayamma Gāvuṇḍa** (ll. 13-17), after which comes the formal statement of a gift of land and houses by the latter to the sanctuary presided over by Vāmaśakti (ll. 17-24).

The **date** is given on ll. 17-18 as : the cyclic year Krōdhi, the 49th of the Chāḷukya Vikrama era ; Āshāḍha śuddha 5 ; Sunday. This is irregular. The given *tithi* was current at sunrise on **Wednesday, 18 June, A.D. 1124,** and ended about 9 h. 16 m. after mean sunrise.[1]

The only **places** mentioned are **Kundūr** (l. 19), **Eraṇigereyahaḷḷi** (l. 19), **Konnasagere** (l. 21), and the *tīrthas* (l. 25). Kundūr is the modern Narēndra, on which see above, Vol. XIII, p. 298.

TEXT.[2]

[Metres : vv. 1, 5, *Anushṭubh* ; vv. 2-4, *Kanda*.]

1 Namas=tuṁga-ś[i*]raś-chumbi-chaṁdra-chāmara-chāravē [1*] trailōkya-nagar-āraṁbha-mūḷa-staṁbhāya Sa(śa)ṁbhavē || [1*]

2 Svasti samasta-bhuvan-āśraya Śrī-Pri(pṛi)thvī-vallabha mahārājādhirāja paramēśvara paramabhaṭṭ[ā]-

3 rakaṁ Satyāśraya-kuḷa-tiḷakaṁ Chāḷuky-ābharaṇaṁ śrīma[t*]-Tribhuvanamalla-dēvara vijaya-rājyam=u-

4 ttarōttar-ābhivṛidhdhi-pravardhdhamānam=ā-chaṁdr-ārkka-tāraṁ-baraṁ saluttam-ire || Tat-pāda-padm-ōpajīvi ||

5 svasti samasta-bhuvana-saṁstūyamāna Hara-Dharaṇi-prasūta-Triḷōchana-Kadaṁba-vaṁśa-mah-ōda[ya]

6 Mahīdharēṁdhra(dra)-śikhar-ābhyudayamāna-mahā-prachaṁḍa-mārttaṁḍa mārttaṁḍa-kar-ātitīvra-nija-pratā[pa]-

7 vaśīkri(kṛi)ta-sakaḷa-mahī-maṁḍaḷan=uttuṁga- siṁha-lāṁchchhanaṁ vānara-mahā-dhvajaṁ permmaṭṭi-tūryya-nirgghōshaṇaṁ

8 chaturā(ra)śīti-nagar-ādhishṭhit-āshṭādaś-āśvamēdha-dīkshā-dīkshita-kuḷa-prasūta Hima-vad-giriṁdra-ruṁdra-śikhara-

9 sthāpita-mahā-śakti-prabhāvaṁ tyāga-jaga-jhaṁpi jhaṁpaḷ-āchāryya niśśaṁka-Rāma śu(su)bhaṭa-kanaka-nikash-ōpaḷa

[1] I have to thank Mr. R. Sewell for his kindness in verifying my calculations.

[2] From the ink-impression.

10 śaraṇ-āgata-vajra-prākāra lōk-aika-kalpa-druma saṁkrānti-dhavaḷa mūrtti-Nārāyaṇa kīrtti-mārttaṁḍa

11 maṇḍaḷika-lalāṭa-paṭṭa vairi-gharaṭṭa śu(su)bhaṭa-rāja-śikhāmaṇi **Kādaṁba**-chūḍāmaṇ=īty=akhiḷa-nām-āva-

12 ḷi-samā(ma)ḷaṁkṛitar=appa śrīman-mahāmaṁḍaḷēśvaraṁ **Jayakēsi-dēvar** śrīmat-piriy-arasi **Maiḷala-ma**-

13 **hādēviyaru** sukha-saṁkathā-vinōdadiṁ rājyaṁ-geyyuttam-ire || Pasid=ār=bband=uṇa bēḍidoḍ=osed=a-

14 tt=ill=ennad=ikkut-irppare kūḷaṁ vasudhātaḷam=ellaṁ baṇṇisuvinegaṁ **Vāmaśakti-paṁḍita-dēvar** || [2*] Nṛita-vākyaṁ vaṁdi-ja-

15 n-āśrita-sura-taru **Malla-Gavuṁḍan=arra(gra)-tānūjaṁ** matimantaṁ Hara-bhaktaṁ kshitiy-oḷag=**Udayamma-Gavu**-

16 **ḍan**=uttama-purusha || [3*] Siḍil=annaṁ ripu-nichayaṁ toḍaḷd(rd)=eḍeyoḷ bēḷpa janake sura-tarūv=annaṁ kuḍut=e-

17 ḍeyoḷ Bāṇana vol Mṛiḍa-bhaktaṁ dharaṇītaḷadoḷ=**Udayama-Gavuṁḍa**[1] || [4*] Svasti **śrīmach-Chāḷukya**-

18 **Vikrama-varshada 49neya Krōdhi-saṁvatsarad=Āshāḍa**(ḍha) su(śu)ddha 5 Ādityavāradaṁdu **śrīman-mahā-pa**-

19 ṭṭanaṁ **Kundūra** padinaṛuvar=ggāvuṁḍugaḷa Pañcha-maṭha-sthānada sannidhiyoḷ=Eraṇigeṛeyahaḷḷiy=Ā-

20 karika(?)[2] **Malla-Gāvuṁḍana** magan=**Udayama-Gāvuṁḍaṁ** haḷḷiyindaṁ paḍuval=kal-puṁjikey=adaṛiṁ mū-

21 ḍal=ondu mattar=ppaṛala keyyuman=ūr=uṁba Konnasageṛeya mūḍaṇa kōṭiyalu nūṛu ka-

22 mma garddey[u*]maṁ dēvariṁ teṁkal=eraḍu maneya nivēśanamumaṁ Kali-dēva-svāmiya sthān-āchā[ryya Vā]-

23 **maśakti-paṇḍitargge** kāl-garchchi dhārā-pūrvvakaṁ māḍi sarvva-namaśya(sya)-sarvva-bādhā-parihāram=[āgi]-

24 y=**Udayama-Gāvuṁdaṁn**=ā-chaṁdra-sthāyiy=āgi biṭṭa dharmma || Ī dharmmamaṁ pratipāḷi[si]-

25 davargge Gaṁge Vāraṇāśi Kurukshētra Prayāgey=eṁba puṇya-tīrttha-sthānaṁgaḷoḷ sāsira kavi[le]-

26 ya kōḍuṁ koḷagumaṁ pañcha-ratnadoḷ=kaṭṭisi vēda-pāragar=appa mahā-brāh-maṇargge dānaṁ-geyda [pha]-

27 ḷa Ī dharmmaman=aḷidavarggey=ā sās[i*]ra kaviley[u*]man=ā vēda-pāragar=appa mahā-brāhmaṇa[ru]-

28 maṁ ēḷ-kōṭi tapōdhanaruman=ā puṇya-tīrttha-sthānaṁgaḷoḷ=konda mahā-pātakan=akku ||

29 Sva-datt[ā*]ṁ para-datt[ā*]ṁ vā yaṁ(yō) harēti(ta) vasuṁdharā[ṁ*] shashṭir=vīrisha-shāsaṇi[3] vi=

30 shṭa(shṭhā)yāṁ jāyatē krimi[4] [5*]

[1] The syllable *ma* is metrically superfluous.
[2] Apparently so; but the first *ka* may be read as *ra* or *ga*.
[3] Read *varsha-sahasrāṇi*.
[4] Read *kṛimiḥ*.

TRANSLATION.

(Verse 1.) Homage to Śambhu charming with the yak-tail fan which is the moon kissing his lofty head, the foundation-column for the construction of the city of the three worlds

(Lines 2-4.) While the victorious reign of—hail!—the refuge of the whole world, favourite of Fortune and Earth, great Emperor, supreme Lord, supreme Master, ornament of **Satyāśraya's** race, embellishment of the **Chāḷukyas,** king **Tribhuvanamalla,** was advancing in a course of successively increasing prosperity, (*to endure*) as long as moon, sun, and stars :—

(Lines 4-13.) While he who finds sustenance at his lotus-feet,—hail!—the Mahāmaṇḍalēśvara **Jayakēsi-dēva,** who is decorated with the whole series of titles of honour, to wit, " the noble scion of the **Trilōchana-Kadamba** lineage sprung from Hara and the Earth which is praised over the whole world; great august sun rising upon the peaks of the Lord of Mountains; fascinating the whole circle of the earth by peculiar majesty exceedingly intense as the sun's rays; having for **crest** a stately **lion ;** having a **banner** (*bearing the device*) **of a great ape ;** who is (*saluted*) with the noise of *permaṭṭi* drums and (*other*) musical instruments ; who is sprung from the race presiding over eighty-four cities and consecrated in the consecratory rites of eighteen horse-sacrifices ; who has established the puissance of his might upon the massive summits of the Lord of Mountains, the Himavat ; a *jhampaḷāchārya* surpassing the world in bounty ; a Rāma in intrepidity ; a touchstone for the gold of warriors ; an adamant castle for seekers of protection ; a unique tree of desire for the world ; white (*of fame*) as the time of conjunction[1] ; a Nārāyaṇa incarnate ; a sun of glory ; a frontal fillet of feudatory princes ; a grindstone to foes ; a crest-jewel of warrior kings ; a crest-gem of the **Kādambas,**" and the Senior Queen **Maiḷāla-mahādēvi,** were reigning with enjoyment of pleasant conversations :—

(Verse 2.) If any, being hungry, should come and ask for food, **Vāmaśakti Paṇḍita-dēva** will gladly give to him rice without saying nay, so that the whole earth praises (*him*).

(Verse 3.) Of **Malla Gāvuṇḍa,** who is pleasant of speech, a celestial tree to panegyrists and dependents, the eldest son is **Udayamma Gāvuṇḍa,** who is sage, devoted to Hara, a right noble man on earth.

(Verse 4.) Like a thunderbolt on occasions when hosts of foes assail (*him*), like a celestial tree on occasions when he makes gifts to suitors, devoted to Mṛiḍa like Bāṇa, is **Udayama Gāvuṇḍa** on earth.

(Lines 17-24.) Hail! On Sunday, the 5th day of the bright fortnight of Āshāḍha in the **cyclic year Krōdhi, the 49th** (*year*) **of the Chāḷukya-Vikrama era,** in the presence of the Sixteen Gāvuṇḍus of the great city of **Kundūr** (*and*) the establishment of the Five Maṭhas, **Udayama Gāvuṇḍa,** son of the **Ākarika(?) Malla Gāvuṇḍa** of Eraṇigeṟeyahaḷḷi, having laved the feet of **Vāmaśakti Paṇḍita,** Āchārya of the establishment of Kali-dēva-svāmi, with pouring of water granted for as long as the moon shall endure a pious foundation on *sarvanamasya* tenure, immune from all conflicting claims, (*comprising*) a gravel-field of one *mattar* west of the village (*and*) east of the stone-heap, and a paddy-field of one hundred *kamma* at the eastern corner of the Konnasageṟe used by the town, and two dwelling-houses south of (*the sanctuary of*) the god.

(Lines 24-28 : a prose formula of the usual type.)

(Verse 5 : a common Sanskrit verse.)

[1] Cf. *dīvāḷigeḥara-dhavaḷam*, above, Vol. XII, p. 269. The phrase probably refers to the Dīpāvalī or Diwāḷi festival, from Āśvina kṛ. 14 to Kārttika śu. 2.

No. 10.—ARASIBIDI INSCRIPTION OF THE REIGN OF SOMESVARA I: SAKA 969.

By Lionel D. Barnett.

Arasībiḍi, the ancient **Vikramapura,** is a decayed village in the Hungund *tāluka* of Bijāpūr District, situate in lat. 15° 54′ and long. 75° 58′ (cf. *Ind. Ant.*, Vol. 30, p. 260). Its name is written as *Arsubidda* on the Indian Atlas sheet 58 and the Hyderabad Survey sheet 30. In the local temple known as the Sūḷeguḍi was found a broken tablet containing the present record; an ink-impression was prepared for the late Dr. Fleet, which is now in the British Museum, and from it I now edit the text.

The upper part of the stone is decorated with some **sculpture.** Immediately over the inscribed area, on a plinth, is a figure of a squatting Jina, with a cow and sucking calf on his proper left, between two columns; and above this is a series of architectural divisions culminating in a vase-shaped *śikhara.* The inscribed area below is about 2 ft. 2¼ in. broad and 2 ft. 2 in. high; but a line or two at the bottom is lost.—The **character** is a fair Kanarese of the period, the letters vary from ½ in. to ⅝ in. in height. The *ṛi* of *ṛishiyargga*[*ṁ**] in l. 8 is denoted by a modified *ṛi* with a tail attached .—The **language** is Old Kanarese prose, except for the Sanskrit verse-formula of which the first two letters appear on l. 22. The archaic *ḻ* is changed to *ḷ*, except in *eppattaṟa* (l. 12, for *ēlp*°, through *ērpp*°). The word *sarugi* (l. 7) is of some lexical interest.

The **record,** after referring itself to the reign of **Trailōkyamalla-dēva,** *i.e.* **Sōmēśvara I** (ll. 1-4), relates that **Akkā-dēvi,** while in the camp around the fortress of **Gōkāge,**[1] made a grant of lands to the Goṇada-beḍaṅgi[2] Jain temple at Vikramapura, for the maintenance of the establishment and of the attached friars and nuns, among whom special mention is made of **Nāgasēna Paṇḍita** of the Hogari[3] Gachchha of the Varasēna Gaṇa of the Mūla Saṅgha (ll. 4-9). The rest of the inscription is taken up with the details of the endowment; among these we learn that some of the land was purchased from **Daḍigarasa** (l. 17), who was very possibly a member of the Bappura family which has left a record of its history in the Sūḍi inscription no. K. (above, Vol. XV, p. 106; cf. *Ind. Ant.*, Vol. XXX, p. 266).

The **date** is given on ll. 9-11 as: Śaka 969, the cyclic year Sarvajit; the new-moon of Chaitra, a Sunday; an eclipse of the sun. These details are perfectly regular. The given *tithi* corresponded to **Sunday, 29 March, A.D. 1047,** on which day it ended 6 h. 14 m. after mean sunrise.[4] On the same day, at 5 h. 54 m. after mean sunrise, there was an eclipse of the sun (*Indian Calendar*, p. 121).

The following **place-names** are mentioned: **Gōkāge** (l. 6); **Vikramapura** (ll. 6, 13); the **Kisukāḍu Seventy** (ll. 11-12); **Gāṇada Hāḷūr** (l. 12); **Muṟuvadina Pāḷu** (l. 13); **Rāyagaṭṭe** (l. 15); the tank of **Kappaḍi** (l. 18); **Benares** (l. 19). Gōkāge is the modern Gōkāk, the headquarters of the Gōkāk *tāluka*, in Belgaum District, situate in 16° 10′ lat. and 74° 49′ long. Vikramapura is Arasībiḍi (see above). On Kisukāḍu see *Ind. Ant.*, Vol. XXX, p. 259 ff. Gāṇada Hāḷūr is given on the Indian Atlas as "Ganuduhal," about 3 miles S.E. of Arasībiḍi in lat. 15° 52¾′ and long. 76° 1′ (cf. *ibid.*, p. 261). The other local names I cannot trace.

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[1] See *Dyn. Kan. Distr.*, pp. 435, 439. Dr. Fleet understood the words *sutt-irdda* to mean "besieging," which is possible, but not necessary.

[2] This title is evidently derived from Akkā-dēvi's title *guṇada beḍaṅgiyar*, and shows that the temple was under her especial patronage.

[3] This name occurs also, in the older form *Pogari*, in *Ind. Ant.*, Vol. XIX, p. 272, and *Ep. Carn.* VII. i., Sk 124.

[4] I have to thank Mr. R. Sewell for his kindness in verifying my calculations.

TEXT.[1]

1 Svasti samasta-bhuvan-āśraya Śrī-Pṛithvī-vallabha mahārājādhirāja paramēśvara-pa-
2 ramabhaṭṭāraka **Satyāśraya**-kula-tilaka **Chāḷuky**-ābharaṇa śrīma[t*]-**Traiḷōkyama-**
3 **lla-dēvara** vijaya-rājyam=uttarōttar-ābhivri(vṛi)ddhi-pravarddhamānam=ā-chaṁdr-ārkka-tā-
4 raṁ-baraṁ saluttam-ire [|*] Svasti ari-nrī(nṛi)pa-makuṭa-ghaṭita[2]-charaṇ-āravī-(vi)ṁdeyar=Ggaṁgā-snāna-
5 pavitreyar=ddīn-ānātha-chī(chi)ntāmaṇigaḷ=ēka-vākyo[ya*]r=ggunada beḍaṁgiyar=appa śrīmad-**A-**
6 **kkā-dēvi**[ya*]r **Gōkāgeya** kōṭeya vu(su)tt-irdda bīḍinalu **Vikramapurada** Goṇada-beḍaṁgiya
7 Jin-ālayakke khaṇḍa-sphuṭita-sudhā-karmmakkaṁ gandha-dhūpa-dīpakkaṁ sarugiga[ṁ] **Mūla-saṁga**(gha)-
8 **Va**[ra*]**sēna-gaṇada Hogariya gachchhada** **Nāgasēna-paṇḍitargga**[ṁ*] all=irppa ṛishiyargga[ṁ*] ajjiya-
9 rgga[ṁ*] āhāra-dānakkaṁ ajjiyara kappaḍak[k*]aṁ kuḍuva bhūmi **Sa(śa)ka-varsha 969 neya**
10 **Sarvvajit-saṁvatsarada** Chaiṁ(chai)trad=amāsye Ādityavāradaṁdina sūryya-gra-
11 haṇa-nimittaṁ dhārā-pūrvvakaṁ māḍi ṇagaradh(d)=anubhavaṇe(ne ?) mukhyam=āgi **Kisu-**
12 **kāḍ=eppattaṛa** baḷiya sarvva-namasyam=āgi biṭṭa bāḍaṁ **Gāṇada Hāḷūr**=oṁdu
13 **Vikramapurada** yīśānyada des[e*]y[iṁ*] tōṁṭaṁ mattar=oṁdu ūriṁ teṁka Muṛuvadina pā-
14 ḷa nairityada deseyiṁ **paṇḍita-Nāgadēvaṁge** sarvva-namasya martta[3] paṁn-neraḍu alliṁ teṁka
15 paṛekāṛa **Kētōjaṁge** sarvva-namasya mattar=irppatta-nālku ūriṁ baḍaga **Rāya-gaṭṭeyiṁ**
16 mūḍa paṛekāṛa **Kētōjaṁge** tōṁṭa mattar=oṁdu alliṁ paḍuva kalkuṭiga **Sūrōjaṁge** sa-
17 rbba-namasyaṁ mattaru panneraḍu tōṁṭa mattar=oṁdu **Daḍigarasana** kayyalu māṛu-goṇḍu dēvargge koṭ[ṭa]
18 bhūmi **Kappaḍiya** keṛeyiṁ teṁka manneya-v[o]ladalu sarvva-namasya mattaru 50 [||*]
19 I(ī) dharmmamaṁ sva-dharmmadiṁ rakshishi(si)davar Vāraṇāsiyalu ondu kōṭi kavileyu-
20 maṁ vēda-pālanar=appa br[ā*]hmaṇarige koṭṭa pha[ḷa]maṁ paḍevar I(ī) dharmmaman=aḷidava-
21 r ā sthānadoḷ=anitu kavileyuman=anirpe(tu) brāhmaṇar[umaṁ . . . .]
22 sā* || Sāmā[nyō=yaṁ . . . .]

[1] From the ink-impression.

[2] The engraver has written *ghata*, and added *ṭi* in smaller script under the line.

[3] Read *mattar*.

TRANSLATION.

(Lines 1-4.) While the victorious reign of—hail!—the asylum of the whole world, favourite of Fortune and Earth, great Emperor, supreme Lord, supreme Master, ornament of **Satyāśraya's** race, embellishment of the **Chāḷukyas**, king **Trailōkyamalla**, was advancing in a course of successively increasing prosperity, (*to endure*) as long as moon, sun, and stars :—

(Lines 4-9.) Hail! she whose foot-lotuses are touched by the diadems of opponent kings, who is pure through bathing in the Ganges, a wishing-jewel to the distressed and masterless, uniform in speech, adorned with virtues, **Akkā-dēvi**, in the camp around the fortress of **Gōkāge**, granted land for (*the expenses of*) plastering the broken and burst (*masonry*) of the Goṇada-beḍaṅgi Jina temple at Vikramapura, and for (*the supply of*) scent, incense, and lamps, and for *sarugi*,[1] and for the maintenance of **Nāgasēna Paṇḍita**, (*a friar*) of the Hogariya Gachchha of the Varasēna Gaṇa of the Mūla Saṅgha, and of the friars and nuns residing there and for the cloaks of the nuns :—

(Lines 9-18.) The lands given (*by her*) to the god, which she purchased of **Daḍigarasa**, on Sunday, the new-moon day of Chaitra in **the cyclic year Sarvvajit, the 969th** (*year*) **of the Śaka era**, on the occasion of an eclipse of the sun, with the performance of pouring of water, were : **Gāṇada Hāḷūr**, a town forming part of the **Kisukāḍu Seventy**, granted on *sarva-namasya* tenure, in its entirety,[2] with usufruct of the citizens (?) ; one *mattar* of garden on the north-east of Vikramapura ; south of the town, on the south-west of the Muṟuvadu Waste-land, twelve *mattar* on *sarva-namasya* tenure for **Paṇḍita Nāgadēva** ; to the south thereof, twenty-four *mattar* on *sarva-namasya* tenure for the drummer **Kētōja** ; north of the town, east of Rāyagaṭṭe, one *mattar* of garden for the drummer **Kētōja** ; on the west thereof twelve *mattar* on *sarva-namasya* tenure (*and*) one *mattar* of garden for the stone-mason **Sūrōja** ; (*furthermore*,) 50 *mattar* on *sarva-namasya* tenure in the estate of the seigniory south of the Kappaḍi tank.

(Lines 19-21 : a prose formula of the usual type.)

(Line 22 : the beginning of a common Sanskrit verse.)

No. 11.—THE BRAHMA-SIDDHANTA OF BRAHMAGUPTA (A.D. 628).

WORKING TABLES FOR COMPUTATION OF ANCIENT DATES BY THE TRUE, OR APPARENT, MOTIONS OF SUN AND MOON.

By ROBERT SEWELL (I.C.S., RETIRED).

A continuation of the author's "Indian Chronography."

311. In para. 257 of my article on "*The true longitude of the sun in Hindu astronomy, the Siddhānta-Śirōmaṇi*" (*above, Vol. XIV, p. 241*), and again in a later article on *The Siddhānta-Śirōmaṇi*, § 271 (Vol. XV, pp. 159 sqq.), I discussed the question of the values assigned in the seventh century A.D. by Brahmagupta to the twenty-four base-sines of angles in the quadrant; and expressed the opinion that when, but not until, definite assurance was obtainable that the values stated in the only available copies of the *Brahma-Siddhānta* were[3] really those fixed by its author, working Tables framed according to its postulates might safely be prepared for the computation of ancient dates.

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[1] This term occurs elsewhere, *e.g.* in *Ep. Carn.* II (*Sravaṇa Beḷgoḷa*), No. 56, p. 52.

[2] Literally, "one."

[3] One MS. copy in the India Office, London, and Benares printed edition.

In response to my appeal Mr. G. R. Kaye (Curator, Board of Education, Simla) has been kind enough to assist me. He tells me that there can be no doubt but that the values given for the several base-sines in the edition of the *Brahma-Siddhānta*, printed and published in Benares, are correct, and that Brahmagupta certainly made his calculations with a radius (sin. 90°) of 3270′, discarding that of 3438′, which seemingly had been in use in India since the time of the Greeks.[1] Mr. Kaye went fully into the subject in a very learned article, "*Ancient Hindu Spherical Astronomy*," published in the *Journal of the Asiatic Society of Bengal* in 1919 (*New Series, Vol. XV, No. 3*), which contains (*Table 8, p. 187*) a list of the sine-values as determined by the authors of the *Pauliśa-*, *Ārya-*, and *Brahma-Siddhāntas*. He points out that, when properly applied, the equations of the sun's and moon's centres obtained from the sine-values of Brahmagupta agree with those derived from the values assigned by the other authorities.

Accordingly I have prepared the Table of Brahmagupta's sines and resulting base-equations of the sun's centre (*Table LXXXIX below*); and a comparison between these and the equations of the *Siddhānta-Śirōmaṇi* (*Table XLVII above, Vol. XIV, col. 9, and Prof. Jacobi's Tables, XXIVB above Vol. I*) proves that there is only a verytrifling difference whether we use Brahmagupta's, or the older—and later—sine-values. By the *Siddhānta-Śirōmaṇi*, with radius 3438′, the sun's greatest equation, that of 90°, $=2°\ 10'\ 31''$, exact. By the *Brahma-Siddhānta*, with radius 3270′, it $=2°\ 10'\ 31''{\cdot}19$. We may therefore safely use Table LXXXIX (*below*)[2] and Table LIX (*above, Vol. XV*) for the sun's and moon's equations by the *Brahma-Siddhānta*.

312. The *Brahma-Siddhānta* was composed by Brahmagupta in A.D. 628 and is said to have been extensively used in some parts of India, its principal rival being the *Ārya-Siddhānta* of Āryabhaṭa, known in later years as the *Laghu-Ārya* to distinguish it from the *Mahā-Ārya-Siddhānta* of the tenth century. This last, called also the *Second Ārya-Siddhānta*, seems to have had no great following. The *Rājamṛigāṅka*, an astronomical work of A.D. 1042 introduced, according to the information available to the late Sankara Bālkrishna Dikshit, some important changes into the system of Brahmagupta; but unfortunately no complete copy of it has yet been obtained, and the necessary particulars are not to be found in those fragments which have come to light. It is not possible therefore to frame any accurate Tables for calculation by the *Rājamṛigāṅka*, and we must rest satisfied with the assurance of Mr. S. B. Dikshit[3] that the *Siddhānta-Śirōmaṇi* is the same as the *Rājamṛigāṅka* in the matter of calculation of a *pañchāng*. Tables for use by the former have already been published by me, comprising the period A.D. 1100-1750 (*above, Vol. XV*).

All the authorities appear to arrive at similar or almost similar results in their computation of the lunar tithis, when worked by the true or apparent motions of sun and moon; but, since they differ in their estimate of the position of the sun's apsis at a given date, they necessarily differ somewhat in their estimate of the moment in each year when the true sun reaches long. 0°, the moment, that is, of "true Mēsha-saṁkrānti." This difference leads to differences in the lengths of the true solar months, and consequently to differences in the intercalation and suppression of true lunar months; which differences, again, occasionally cause differences of a whole lunar month in the beginning of the luni-solar year and differences in the names of some of the lunar months therein.

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[1] It would be interesting to learn his reason for the change. Later Indian astronomers reverted to the radius of 3438′, which is correct. With $\pi = 3{\cdot}14159$ the radius $= 3437{\cdot}74967$. Brahmagupta's radius 3270 implies a ratio $\pi = 3{\cdot}303$. The ratio according to Archimedes (B.C. 250) was 3·14286. The ratio $1 : \sqrt{10}$ mentioned in the *Sūrya-Siddhānta* = 3·16228.

[2] Or Table XLVII (*above, Vol. XIV*), col. 9; also Professor Jacobi's Tables XXIVA, XXIVB (*Vol. I*).

[3] *Indian Calendar*, p. 8.

But we are now better able to deal with these matters than before. Dates can be easily computed by the true motions of sun and moon according to the *Sûrya-Siddhânta* for the whole historical period from A.D. 300 to 1900 (*Indian Calendar*)[1]; according to the *Ârya-Siddhânta* from A.D. 900 downwards (*above, Vol. XVI*); according to the *Brahma-Siddhânta* (*the present paper*) from A.D. 600 to 1200; and according to the *Siddhânta-Śirômaṇi*, *Râjamṛigâṅka* and other works of the time of Bhâskarâchârya from A.D. 1100 to 1750 (*above, Vol. XV*); these periods comprising the outside limits of use.

And, as regards computation by the mean motions of sun and moon, which system is believed to have been in universal use down to about A.D. 1100, and perhaps in some places to a considerably later date, we now have Tables for work by the *Ârya-Siddhânta* from A.D. 500 to 1400 (*above, Vol. XVII*); while I hope to be able to publish here after a set of similar Tables for the *Brahma-Siddhânta*, also embracing the outside period of use.

All these Tables are framed on the same system, so as to enable calculation to be made as easily and rapidly as possible.

Elements of the Brahma-Siddhânta.

313. (i) The length of the mean solar sidereal year is 365·2584375 days, or $365^{d}\ 6^{h}\ 12^{m}\ 9^{s}$. The *Siddhânta-Śirômaṇi* adhered to this estimate.

(ii) Brahmagupta's sines of angles of the quadrant differ from those of the other authorities. His sine of 90°, the radius, = 3270′ instead of 3438′. His sine of 3° 45′ = 214′ instead of 225′. The 24 base-sines are given in Table LXXXIX below.

(iii) The equations, however, which are based on these sine-values are practically the same as those of the *Siddhânta-Śirômaṇi* (*compare Table XLVII above, Vol. XIV, col. 9, and Table LXXXIX below*). Tables LV, LVI, LIX (*above, Vol. XV*) may be therefore used as well for the *Brahma-Siddhânta* as for the *Siddhânta-Śirômaṇi*.

(iv) The greatest equation of the sun's centre, that of 90°, is, in 10,000ths of the circle, 60·425925. The greatest equation of the moon's centre is, in similar measurement, 139·8581018̇52. The sum of the two is 200·284027̇.

(v) The epoch of the Kaliyuga era was mean sunrise, taken as 6 A.M., on Friday, 18 February, B.C. 3102, that moment being $0^{h}\ 0^{m}\ 0^{s}$ Laṅkâ time. This was the moment of mean Mêsha-saṁkrânti, when the mean sun's centre reached long. 0°. True Mêsha-saṁkrânti, when the true sun's centre reached long. 0°, occurred on Tuesday, 15 February, B.C. 3102, at $19^{h}\ 52^{m}\ 21^{s}{\cdot}5$ after mean sunrise at Laṅkâ.

(vi) The circumference of the sun's epicycle is 13° 40′, that of the moon 31° 46′. The epicycles are not contracted at any point. In this the *Siddhânta-Śirômaṇi* concurs (*Jacobi, Vol. I above, p. 441*).

(vii) The line of apsides of the sun's orbit has a constant forward shift, the perigee-point (on the longitude of which my calculations are based) moving 0″·144 per ann., or 14″·4 in a century. According to the *Siddhânta-Śirômaṇi* the movement is more rapid, amounting to 1″·044 per ann. (*Jacobi, op. cit.*).

(viii) The *śôdhya*, or time-interval between true and mean Mêsha-saṁkrântis, was, in K.Y. 0 or at the epoch of the Kaliyuga era, according to Dr. Schram,[2] $2^{d}{\cdot}171971$ or $2^{d}\ 4^{h}\ 7^{m}\ 38^{s}{\cdot}5$. With this the *Siddhânta-Śirômaṇi* agrees. But in later years the *śôdhya*, as postulated by the two authorities, differs in value owing to the difference between the two *Siddhântas* in their estimate of the movement of the sun's apsis. (*See vii above.*)

[1] Also by the *Indian Chronology* of Dewan Bahadur L. D. Swamikannu Pillai, M.A., whose Tables are framed on a different system.

[2] *Indian Chronography*, § 89 D, p. 16.

(ix) The position of the sun's apsis (perigee) at K.Y. 0, the epoch of the Kaliyuga, was 257° 45′ 36″,[1] and his mean anomaly was 102° 14′ 24″, or, in 10,000ths of the circle, 284·0.

(x) The position of the moon's apsis (perigee) at the same moment was 305° 29′ 46″ [2]; and her mean anom. was 54° 30′ 14″, or, in 1,000ths of circle, 151·399691358.

(xi) The sun's mean velocity (he is treated as a planet) and the length of the mean solar year being the same both by the *Brahma-Siddhānta* and the *Siddhānta-Śirōmaṇi*, his mean long. at any moment must be the same by both, and so also the length of the mean solar month. But the two authorities are not in exact accord as to his true long. and the length of the true solar month.

Shift of sun's apsis. The śōdhya. Length of true solar year.

314. The length of the mean solar year being the same, *viz.* 365^d 6^h 12^m 9^s, by both the *Brahma-Siddhānta* and the *Siddhānta-Śirōmaṇi*, the first portion of § 273 above (Vol. XV) and accompanying Table A apply as well to the former as to the latter. But for the latter portion that section and its Table B, the following must be substituted when dealing with the *Brahma-Siddhānta*, the two authorities not being in accord as concerns the matter in question.

315. As stated above, the sun's perigee-point according to the *Brahma-Siddhānta* advances annually 0″·144 along the ecliptic, and in consequence of this shift the true sun's velocity at long. 0″ is a little greater every year than the year before, *i.e.* the true sun reaches long. 0°, or the moment of true Mēsha-saṁkrānti occurs, a little earlier each year. In every year there is a slight increase in the distance and time-difference (our *śōdhya*) between the mean and true suns at that point of the orbit. Dr. Schram has carefully calculated the value of this *śōdhya* at the moment of true Mēsha-saṁkrānti at the beginning of several millenniums, and his results for the period embraced in my general working Table LXXXII are stated in the following Table B.

TABLE B.

VALUE OF ŚŌDHYA BY THE BRAHMA-SIDDHĀNTA.

K.Y. year expired.	A.D.	EXACT VALUE OF ŚŌDHYA AT BEGINNING OF CENTURIES.				
		days and decimals.	d.	h.	m.	s.
3700	599-600	2·1729145	2	4	8	59·8128
3800	699-700	2·1729400	2	4	9	2·0160
3900	799-800	2·1729655	2	4	9	4·2192
4000	899-900	2·1729910	2	4	9	6·4224
4100	999-1000	2·1730165	2	4	9	8·6256
4200	1099-1100	2·1730420	2	4	9	10·8288
4300	1199-1200	2·1730675	2	4	9	13·0320

One result of this shift of apsis is that, by the *Brahma-Siddhānta*, the true sun reaches the 0° point of long. 0^s·022032 earlier every year than the year before, and in consequence the length of the true solar year, or the time needed for the true sun to travel from true Mēsha-saṁkrānti

[1] Jacobi, *above*, Vol. I, p. 442, § 83, where he gives the place of the apsis (apogee) as 77° 45′ 36″. See also E. Burgess's "*Sūrya-Siddhānta.*"

[2] Moon's apogee given by Jacobi as 125° 29′ 46″.

in one year to true Mêsha-saṁkrânti in the next, is (365^d 6^h 12^m 9^s—0^s·022032) 365^d 6^h 12^m 8^s·977968. [The exact moment of true Mêsha-saṁkrânti in each year from A.D. 599 to 1200 is given in the general Table LXXXII below, cols. 13-17. It can be tested by the use of Table A, § 273, referred to above, and Table B here given, using the "longer rule" stated in § 273 or in *Indian Chronography*, p. 61.]

Another result of the shift is that the sun's mean anomaly, or the mean sun's distance from the sun's perigee-point, decreases every year by 0"·144 or 14"·4 in a century. Reckoning in 1,000ths of circle for valuation of our *c* (sun's mean anom.) in the Tables, 14"·4 = 0·0i. The value of *c* therefore decreases 0·0i in a century, and this decrease has to be taken into account from K.Y. 0, the epoch of the Kaliyuga. This has been done in the preparation of the Tables which follow.

The increase of a, b, c, in centuries, years, days and fractions of days.

316. Following on what has been stated, we learn that Tables LIVA and B, which deal with the periodical increases of *a*, *b* and *c* according to the *Siddhânta-Śirômaṇi*, may safely be used for calculation by the *Brahma-Siddhânta*, with the one reservation as to the increase of *c* in a century. *a* being the distance of mean moon from mean sun, and the *longitude* of the mean sun not being affected by the shift of apsis, but only his *mean anom.*, or distance from the point of the apsis, it appears that the rate of increase of *a* must be same by both authorities.

As to the rate of increase of *c* it is, by the *Siddhânta-Śirômaṇi*, centennially less by 0·0805 (§ 273 above), and this was taken into account in the preparation of the heading of Table LIVA, where a footnote is appended shewing what the rate of increase would be per century if no such deduction had been made. This rate is, in thousandths of a circle, 997·690008075 in a century of 36525 days, and 0·427795618 in a century of 36526 days. By the *Brahma-Siddhânta*, the centennial decrease in the sun's mean anomaly being 0·0i, the amount of increase of *c* per century is, for a century of 36525 days, 997·678896964, and for a century of 36526 days is 0·416684507. The difference between the two authorities in shorter periods may be ignored except in some extraordinarily close case. If it is ever needed, the increase in *c* in one year may be reduced by 0·0001 from the Table quantity.

Otherwise Tables LIVA and B stand good for calculations by the *Brahma-Siddhânta.*

The values of a, b, c at the beginning of K.Y. 3700.

317. The general Table LXXXII below begins from the beginning of K.Y. 3700 expired. Table LXXXVI states the value of *a*, *b*, *c* at that moment, and at the similar moment at the beginning of subsequent centuries. It is necessary therefore to explain how these figures were calculated.

(i) *The value of* a (*distance of mean moon from mean sun*) *in K.Y. 3700.* According to Hindu astronomers mean moon and mean sun were in conjunction at the moment of mean Mêsha-saṁkrânti in K.Y. 0, the epoch of the Kaliyuga; or, in other words, at that moment *a* = 0. In the 37 succeeding centuries there were 32 common and 5 defective centuries. Taking the century values of *a* given in the heading of Table LIVA and multiplying for 32 common and 5 defective centuries, we arrive at the figure 6567·1089452 84 as the value of *a* at the beginning of the 37th century K.Y., whole revolutions of 10,000 each being omitted. From this figure has to be deducted,—according to the working system of the *Indian Calendar*, which follows Largeteau and Jacobi,—the sum of the greatest equations of sun and moon, *viz.* 200·2840277 (*above § 313, iv*). This gives us the value of *a* at the beginning of K.Y. 3700 (expired) as 6366·824917506.[1]

[1] Professor Jacobi differs by about 17 units. He gives the figure 6384·0 (*Vol. XI above, p. 167, Table IXA*). I can give no explanation of the reason for this; and can only state fully, as in the text, my bases of calculation.

Now this value stands for mean sunrise of Sunday, 22 March, A.D. 599, *i.e.* for the sunrise succeeding the moment of occurrence of mean Mêsha-saṁkrânti in K.Y. 3700; but in all my Tables the calculation is for mean sunrise on the actual day of that occurrence, and we have therefore to deduct one day's value of *a* (*viz.* 338·631985412—Table LIVA above) from the above estimate. This done, we have, for mean sunrise on Saturday, *a* = 6028·192932094.

(ii) *The value of* b (*moon's mean anom.*) *at the same moment.* At the *epoch* of the Kaliyuga the moon's mean anom. was, as stated above (§ *313*, *x*), in 1,000ths of a circle, 151·399691358. Using the century figures of *b* in the heading of Table LIVA, and multiplying for 32 common and 5 defective centuries, it is found that, excluding whole revolutions of 1,000 each, the result is 604·144838202. Adding the value of *b* at K.Y. 0, as above, we have at beginning of K.Y. 3700, for the value of *b*, 755·544529560.[1] But this (*see above, i*) was its value at mean sunrise on Sunday, 22 March, A.D. 599. Deducting one day's value of *b* (36·291649786) the fixture for mean sunrise on Saturday, 21 March, amounts to 719·252879774.

(iii) *The value of* c (*the sun's mean anom.*) *at the same moment.* The correct increase of *c* by the *Brahma-Siddhânta* in centuries of 36525 and 36526 days has been given above in the latter part of § 316. Multiplying those quantities for 32 common and 5 defective centuries, and discarding whole revolutions of 1,000 each, we arrive at the increase, after 37 centuries, of 1·728389044. To this has to be added the value of *c* at K.Y. 0 (*above*, § *313*, *ix*), *viz.* 284·0. The value of *c*, therefore, at mean sunrise of Sunday, 22 March, A.D. 599, was 285·728389044.[2] Deducting the *c* for one day (2·737787543) we have finally, for mean sunrise on Saturday, 21 March, *c* = 282·990601501.

The entries, therefore, for the aforesaid Saturday of K.Y. 3700 in Table LXXXVI below are

$$a = 6028{\cdot}1929$$
$$b = 719{\cdot}2529$$
$$c = 282{\cdot}9906.$$

The rest of that Table follows by addition of the proper century values.

Duration of true solar months.

318. It has been mentioned above (§ *313*, *xi*) that, while the length of the mean solar month must be the same both by the *Brahma-Siddhânta* and the *Siddhânta-Śirômaṇi*, the lengths of the true solar months according to the two authorities differ because of their different estimate of the shift of the sun's apsis. Thus in K.Y. 4000, the middle year of my general Table LXXXII below, the sun's perigee-point according to the *Siddhânta-Śirômaṇi* was at long. 258° 55′ 12″, while by the *Brahma-Siddhânta* it was at long. 257° 55′ 12″. Hence the velocity of the true sun (he is always considered as a planet) at the several true solar *saṁkrântis*, when the true sun's centre enters the several signs, is not the same by the two authorities quoted. And this has necessitated the preparation of a new Table (*LXXXIIIA below*), giving the lengths of the true solar months and increase of *a*, *b*, *c* therein individually and collectively according to the *Brahma-Siddhânta*.

There being in K.Y. 4000 a difference of only 4′ 48″ between the positions of the sun's perigee, as estimated by the *Brahma-Siddhânta* and by the *First Ârya-Siddhânta*, the former placing it at 257° 55′ 12″ and the latter at 258°, it was considered sufficiently safe to use Table XLIX (*above, Vol. XIV*) for the true sun's velocity at different points of his orbit in hours and minutes, and Table L-A for seconds. His true long. at each *saṁkrânti* was computed from his known mean longitude + the equation of the centre, which was calculated in each case.

[1] Professor Jacobi's figure for this is 758·1, in my notation, against my 755·5.

[2] This agrees with Professor Jacobi's fixture, which, measured from perigee and in my notation, is 285·7.

Thus was obtained the length of each month in days, hours, etc. For the increase of *a*, *b*, *c* during the periods so determined Tables LIVA and B, which are applicable to the *Brahma-Siddhānta* as well as to the *Śiddhānta-Śirōmaṇi*, were used.

Note on work for the nakshatra.

319. In our method of work s = the true sun's longitude and t = the *tithi*-index (which shews the true moon's distance from the true sun) at the given moment. $s + t$ = the *nakshatra*-index *n*, which gives the true moon's place in the heavens, or her apparent longitude. The value of t is ascertained by the ordinary calculation for a date. The value of s has to be found.

By the *Ārya-Siddhānta* the formula for finding s, c being the sun's mean anom. at the given moment, is $s = (c \times 10) + 7226$ — eqn. c ; where the factor 7226, which represents in 10,000ths of circle the long. of sun's perigee *plus* the sun's greatest equation, is a constant.[1]

By the *Sūrya-Siddhānta*, as exemplified in the *Indian Calendar* Tables, the numerical factor is not 7226, but varies in the period A.D. 900 to 1900 from 7206·5077 to 7207·4035 being fixed for rough work at 7207. The variation is due to the postulated shift of the sun's perigee-point.

By the *Siddhānta-Śirōmaṇi* there is, for the same reason, a variation in the numerical factor, *viz.* from 7252·6466 in A.D. 900 to 7259·0910 in A.D. 1700,—roughly from 7253 to 7259.

By the *Brahma-Siddhānta* the numerical factor varies from $7224{\cdot}5\dot{3}7\dot{0}$ in A.D. 600 to $7225{\cdot}2\dot{0}3\dot{7}$ in A.D. 1200 (the limits of the general Table LXXXII below). For rough work therefore by this authority the formula is $s = (c \times 10) + 7225$ — eqn. c.

For more accurate work the value of c should be calculated (by the Tables) with decimals, and instead of multiplying c by 10 its value should be changed from thousandths of circle (as in the Table-result) to ten thousandths by moving the decimal point one place to the right[2] ; the value of eqn. c can be obtained from Table LVI with great accuracy ; and the numerical factor can be taken from the following summary.

K.Y. century.	A.D. century.	Exact factor in formula.	Roughly.
3700	599-600	$7224{\cdot}5\dot{3}7\dot{0}$	7225
3800	699-700	$7224{\cdot}6\dot{4}8\dot{1}$	
3900	799-800	$7224{\cdot}7\dot{5}9\dot{2}$	
4000	899-900	$7224{\cdot}8\dot{7}0\dot{3}$	
4100	999-1000	$7224{\cdot}9\dot{8}1\dot{4}$	
4200	1099-1100	$7225{\cdot}0\dot{9}2\dot{5}$	
4300	1199-1200	$7225{\cdot}2\dot{0}3\dot{7}$	

Examples.

It is not necessary to give a number of examples of work by the present Tables. The system of calculation being exactly the same as that of the *Indian Calendar* and throughout the present series of articles, the examples already published for computation by other authorities

[1] See *Indian Calendar*, § 156, p. 97 ; article on the *Siddhānta-Śirōmaṇi*, above, Vol. XV, § 273, "*Note on work for the nakshatra*"; article on the *First Ārya-Siddhānta*, Vol. XV above, § 302 ; and the several examples given in those papers.

[2] Whole revolutions are not necessary for present purposes, and in our system when $a = 10{,}000$ a whole synodic revolution of the mean moon has been completed.

will suffice, *the proper Tables being used*, for work by the *Brahma-Siddhānta*. These Tables are specified in the following pages.

Examples have been given in all my foregoing papers, but perhaps the fullest series is to be found in the article on the *First Ārya-Siddhānta* (*above, Vol. XVI*).

Tables for calculation by the Brahma-Siddhānta.

The system of work for computation of an Indian date will be readily understood by perusal of examples 2 to 11 appended to my paper (*above, Vol. XVI*) on the *First Ārya-Siddhānta*; but the Tables used are of course not all the same. The following list shews how accurate results by the *Brahma-Siddhānta* are to be obtained in calculation by the movements of true sun and true moon.

Table LXXXII below is the general working Table for the *Brahma-Siddhānta* for the period A.D. 599 to 1200 (K.Y. 3700 to 4300 expired).

For names of months and of nakshatras in different parts of India, see Table LXII above (*Vol. XVI, "The First Ārya-Siddhānta"*).

For collective duration of mean lunar months see Table LXIIIA of the same article, or Table III, Part I, *Indian Calendar.*

Table LXXXIIIA below gives, by the *Brahma-Siddhānta*, the length of the true solar months and their collective duration, with the corresponding increases of *a, b, c.*

Table LXXXIIIB states the exact value of *c* and of "equation *c*" at the several true *saṁkrāntis*, or moments of the true sun's centre reaching the several signs.

Table LXXXIIIC shews the value of *c* and of "equation *c*" at the beginning of each century of the Kaliyuga.

For the increase of *a, b, c* respectively in defective and common centuries, and in common years and Leap-years, see Table LIVA, heading; but note that by the *Brahma-Siddhānta* the increase of *c* in a defective century of 36525 days is 997·678896964 and in a common century of 36526 days is 0·416684507. Tables LIVA and B contain the necessary figures for days, hours, minutes and seconds.

Table LXXXIV gives the values of "equation *b*," and Table LXXXV those of "equation *c*," for easy calculation by whole numbers, corresponding respectively to Tables VI and VII of the "*Indian Calendar*," which stand for the *Sūrya-Siddhānta.*

For the more detailed values of "equation *b*" and "equation *c*" of moon and sun use Tables LV and LVI above, Vol. XV, as framed for the *Siddhānta-Śirōmaṇi.*

For the indices of *tithis* (*t*), *karaṇas*, *yōgas* (*y*) and *nakshatras* (*n*) see Table VIII, "*Indian Calendar*," or Table LXVIII (*above, Vol. XVI, "The First Ārya-Siddhānta"*).

For serial numbers of days of a year reckoned from January 1st use Table IX, "*Indian Calendar*," or Table LXIX (*above, Vol. XVI, "The First Ārya-Siddhānta"*).

For conversion of *tithi*-indices and *tithi*-parts into time Table X, "*Indian Calendar*," is to be used, or Table LXX (*above, Vol. XVI, "The First Ārya-Siddhānta"*).

For finding the week-day according to the European Calendar for any century from A.D. 0 to 2300 see Table LXXI (*above, Vol. XIV, "The First Ārya-Siddhānta"*), or Tables XLIA and B (*pp. 176, 177, "Indian Chronography"*).

Table LXXXVI gives the values of *a, b, c* at the beginning of each century of the Kaliyuga by the *Brahma-Siddhānta.*

Table LXXXVII gives the same for odd years of those centuries.

Table LXXXVIII states the daily sunrise values of *a, b, c* for a month previous to the day of Mēsha-saṁkrānti.

Table LXXXIX sets forth the 24 base-sines of angles of the quadrant according to Brahmagupta, and the corresponding equations of the sun's centre.

TABLE LXXXII.

Construction of Table.

The Table is constructed on the lines of Table I of the *Indian Calendar* and is to be used in the same way. The columns are numbered similarly.

Col. 7. The *saṁvatsara*-name,—*i.e.* the name of the Jovian cycle—, of the year is given as determined by my previous calculations (*above, Vol. XIII Table XLII*). Entries in italics point to cases where this *saṁvatsara*-name differs from that given to the same year by *Sūrya-Siddhānta* reckoning.

Col. 8. Months noted in roman characters are intercalated (*adhika*) lunar months. Those in italics are suppressed (*kshaya*) months.

Cols. 13, 19. Figures in brackets give the serial number of the day [measured from January 1st.

Col. 23. a=distance, at mean sunrise, of mean moon from mean sun, or phase of moon stated in 10,000ths of circle, and reduced by the sum of the greatest equations of sun and moon so that calculation of the equations of b and c may always be additive.

Col. 24. b=mean anomaly of moon or mean moon's distance from perigee-point of apsis stated in 1,000ths of circle.

Col. 25. c=mean anomaly of sun or mean sun's distance from perigee, stated in 1,000ths of circle.

Remarks.

A.D. 629-630, *cols. 19, 20.* A very close case. The moment of true new moon was less than half a minute after mean sunrise at Laṅkā on Wednesday, 1st March. And the first *śukla tithi* of the year ended after mean sunrise on Thursday, 2nd March, which was therefore by rule the first civil day of the luni-solar year. If new moon had taken place more than half a minute earlier the first civil day of the year, "Chaitra śukla 1," would have been 1st March.

A.D. 968-69, *col. 8.* At the Kumbha *saṁkrānti* the true moon was waning. The moment of the next, the Mīna, *saṁkrānti* occurred about $2\frac{1}{2}$ minutes after the moment of true new moon, so that the true moon was waxing at the Mīna *saṁkrānti*. Hence the lunar month Phālguna was intercalated. According to the 19-year sequence we should have expected an intercalation of the lunar month Chaitra next following. The sequence shows similar irregularities when examined by other authorities, but only very rarely.

A.D. 974-75, *cols. 19, 20.* Close case. The 1st true new moon after the Mīna *saṁkrānti* occurred 3 minutes before mean sunrise at Laṅkā on 25th February A.D. 974. That therefore was the day "Chaitra śukla 1."

A.D. 963-64, 982-83, *col. 8.* In both these years an intercalation of the lunar month Śrāvaṇa instead of Āshāḍha would have been more in accordance with the 19-year sequence, seeing that Śrāvaṇa was the intercalated month in A.D. 1001 and 1020; but prior to A.D. 963 at intervals of 19 years there had been eight intercalations of Śrāvaṇa, and towards the close of such a run a change of conditions generally becomes apparent.

A.D. 1001-2, 1020-21, *col. 8.* See the previous note. If in these two years the conditions had made necessary an intercalation of Āshāḍha, the 19-year sequence would have been uninterrupted.

A.D. 1128-29, *col. 8.* By the *Brahma-Siddhānta* the intercalation of Phālguna was clearly demanded. See Remarks preceding Table LX (*above, Vol. XV*), on the same year as worked by the *Siddhānta-Śirōmaṇi*.

TABLE

GENERAL TABLE FOR CALCULATION

Conforming to Table I " Indian Calendar "

(See notes on

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3*a*	4	5	6	7	8
3701	522	657	6		599-600	50 Anala . . .		...
3702	523	658	7		*600-01	51 Piṅgala . . .		3 Jyēshṭha .
3703	524	659	8		601-02	52 Kālayukta. . .		...
3704	525	660	9		602-03	53 Siddhārthin .		{ 7 Āśvina / *11 Māgha (ksh.)* }
3705	526	661	10		603-04	54 Raudra . . .		1 Chaitra .
3706	527	662	11		*604-05	55 Durmati . . .		...
3707	528	663	12		605-06	56 Dundubhi . . .		5 Śrāvaṇa .
3708	529	664	13		606-07	57 Rudhirōdgārin . .		...
3709	530	665	14		607-08	58 Raktāksha . .		...
3710	531	666	15		*608-09	59 Krōdhana . . .		4 Āshāḍha .
3711	532	667	16		609-10	60 Kshaya . . .		...
3712	533	668	17		610-11	1 Prabhava . . .		...
3713	534	669	18		611-12	2 Vibhava . . .		2 Vaiśākha .
3714	535	670	19		*612-13	3 Śukla . . .		...
3715	536	671	20		613-14	5 Pramōda . . .		6 Bhādrapada
3716	537	672	21		614-15	6 Prajāpati . . .		...*
3717	538	673	22		615-16	6 Aṅgirasa . . .		...
[illegible]	539	674	23		*616-17	7 Śrīmukha . . .		4 Āshāḍha .
3719	540	675	24		617-18	8 Bhāva . . .		...
3720	541	676	25		618-19	9 Yuvan . . .		...
3721	542	677	26		619-20	10 Dhātṛi . . .		3 Jyēshṭha .
3722	543	678	27		*620-21	11 Īśvara . .		...

LXXXII.

by the Brahma-Siddhānta.

the columns being similarly numbered.

preceding page.)

COMMENCEMENT OF THE									Kali.
Solar year.			Luni-solar year (mean sunrise of civil day on which Chaitra śukla 1 ends).						
Day and month A. D.	Week-day.	Time of true Mēsha-saṁkrānti.	Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17	19	20	23	24	25		1
		H. M. S.							
19 Mar. (78)	5 Thur.	1 6 0	3 Mar. (62)	3 Tues.	9932·8171	66·0032	233·7104		3701
18 Mar. (78)	6 Fri.	7 18 9	21 Feb. (52)	1 Sun.	147·1720	949·5390	205·6250		3702
18 Mar. (77)	0 Sat.	13 30 18	11 Mar. (70)	0 Sat.	181·8544	885·5324	256·9354		3703
18 Mar. (77)	1 Sun.	19 42 27	28 Feb. (59)	4 Wed.	57·5772	732·7766	226·1121		3704
19 Mar. (78)	3 Tues.	1 54 36	18 Feb. (49)	2 Mon.	271·9320	616·3122	203·5023		3705
18 Mar. (78)	4 Wed.	8 6 45	7 Mar. (67)	0 Sat.	9967·9825	516·0140	246·5994		3706
18 Mar. (77)	5 Thur.	14 18 54	24 Feb. (55)	4 Wed.	9843·7052	363·2681	215·7762		3707
18 Mar. (77)	6 Fri.	20 31 3	15 Mar. (74)	3 Tues.	9878·3876	299·1516	267·0865		3708
19 Mar. (78)	1 Sun.	2 43 12	4 Mar. (63)	0 Sat.	9754·1105	146·4956	236·2624		3709
18 Mar. (78)	2 Mon.	8 55 21	22 Feb. (53)	5 Thur.	9968·4653	30·0312	208·1780		3710
18 Mar. (77)	3 Tues.	15 7 30	12 Mar. (71)	4 Wed.	3·1477	966·0247	259·4884		3711
18 Mar. (77)	4 Wed.	21 19 39	2 Mar. (61)	2 Mon.	217·5025	849·5604	231·4029		3712
19 Mar. (78)	6 Fri.	3 31 48	19 Feb. (50)	6 Fri.	93·2254	696·8045	200·5797		3713
18 Mar. (78)	0 Sat.	9 43 57	9 Mar. (69)	5 Thur.	127·9077	632·7980	251·8902		3714
18 Mar. (77)	1 Sun.	15 56 6	26 Feb. (57)	2 Mon.	3·6306	480·0421	221·0669		3715
18 Mar. (77)	2 Mon.	22 8 15	16 Mar. (75)	0 Sat.	9999·6810	379·7440	269·6395		3716
19 Mar. (78)	4 Wed.	4 20 24	6 Mar. (65)	5 Thus.	9914·0358	263·2795	241·5542		3717
18 Mar. (78)	5 Thur.	10 32 33	23 Feb. (54)	2 Mon.	9789·7587	110·5236	210·7310		3718
18 Mar. (77)	6 Fri.	16 44 42	13 Mar. (72)	1 Sun.	9824·4420	46·5171	262·0414		3719
18 Mar. (77)	0 Sat.	22 56 51	3 Mar. (62)	6 Fri.	38·7959	930·0528	233·9559		3720
19 Mar. (78)	2 Mon.	5 9 0	21 Feb. (52)	4 Wed.	253·1507	813·5885	205·8705		3721
18 Mar. (78)	3 Tues.	11 21 9	11 Mar. (71)	3 Tues.	287·8331	749·5820	257·1810		3722

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	
1	2	3	3*a*	4	5	6	7	8
3723	544	679	28		621-22	12 Bahudhānya . .		7 Āśvina .
3724	545	680	29		622-23	13 Pramāthin . . .		...
3725	546	681	30		623-24	14 Vikrama . . .		...
3726	547	682	31		*624-25	15 Vṛisha . . .		5 Śrāvaṇa .
3727	548	683	32		625-26	16 Chitrabhānu . .		...
3728	549	684	33		626-27	17 Subhānu . . .		...
3729	550	685	34		627-28	18 Tāraṇa . . .		4 Āshāḍha .
3730	551	686	35		*628-29	19 Pārthiva . . .		...
3731	552	687	36		629-30	20 Vyaya . . .		...
3732	553	688	37		630-31	21 Sarvajit . . .		2 Vaiśākha .
3733	554	689	38		631-32	22 Sarvadhārin . .		...
3734	555	690	39		*632-33	23 Virōdhin . . .		6 Bhādrapada
3735	556	691	40		633-34	24 Vikṛita . . .		...
3736	557	692	41		634-35	25 Khara . . .		...
3737	558	693	42		635-36	26 Nandana . . .		4 Āshāḍha .
3738	559	694	43		*636-37	27 Vijaya . . .		...
3739	560	695	44		637-38	28 Jaya		...
3740	561	696	45		638-39	29 Manmatha . . .		3 Jyēshṭha .
3741	562	697	46		639-40	30 Durmukha . . .		...
3742	563	698	47		*640-41	31 Hēmalamba . .		7 Āśvina .
3743	564	699	48		641-42	32 Vilamba . . .		...
3744	565	700	49		642-43	33 Vikārin . . .		...
3745	566	701	50		643-44	34 Śārvarin . . .		5 Śrāvaṇa .
3746	567	702	51		*644-45	35 Plava . . .		...
3747	568	703	52		645-46	36 Śubhakṛit . . .		...

LXXXII—*Contd.*

COMMENCEMENT OF THE											
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						Kali.
Day and month A.D.	Week-day.	Time of true Mēsha-saṁkrānti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
18 Mar. (77)	4 Wed.	17	33	18	28 Feb. (59)	0 Sat.	163·5560	596·8261	226·3577		3723
18 Mar. (77)	5 Thur.	23	45	27	18 Mar. (77)	5 Thur.	9859·6063	496·5279	274·9303		3724
19 Mar. (78)	0 Sat.	5	57	36	8 Mar. (67)	3 Tues.	73·9612	380·0635	246·8449		3725
18 Mar. (78)	1 Sun.	12	9	45	25 Feb. (56)	0 Sat.	9949·6840	227·3076	216·0218		3726
18 Mar. (77)	2 Mon.	18	21	54	15 Mar. (74)	6 Fri.	9984·3664	163·3011	267·3321		3727
19 Mar. (78)	4 Wed.	0	34	3	4 Mar. (63)	3 Tues.	9860·0892	10·5451	236·5089		3728
19 Mar. (78)	5 Thur.	6	46	12	22 Feb. (53)	1 Sun.	74·4441	894·0800	208·4235		3729
18 Mar. (78)	6 Fri.	12	58	21	12 Mar. (72)	0 Sat.	109·1265	830·0742	259·7340		3730
18 Mar. (77)	0 Sat.	19	10	30	2 Mar. (61)	5 Thur.††	323·4813	713·6100	231·6485		3731
19 Mar. (78)	2 Mon.	1	22	39	19 Feb. (50)	2 Mon.	199·2041	560·8540	200·8252		3732
19 Mar. (78)	3 Tues.	7	34	47	9 Mar. (68)	0 Sat.	9895·2545	461·5558	249·3979		3733
18 Mar. (78)	4 Wed.	13	46	56	26 Feb. (57)	4 Wed.	9770·9774	307·7999	218·5748		3734
18 Mar. (77)	5 Thur.	19	59	5	16 Mar. (75)	3 Tues.	9805·6597	243·7934	269·8851		3735
19 Mar. (78)	0 Sat.	2	11	14	6 Mar. (65)	1 Sun.	20·0146	127·3290	241·0922		3736
19 Mar. (78)	1 Sun.	8	23	23	23 Feb. (54)	5 Thur.	9895·7375	974·5731	210·9765		3737
18 Mar. (78)	2 Mon.	14	35	32	13 Mar. (73)	4 Wed.	9930·4199	910·5666	262·2870		3738
18 Mar. (77)	3 Tues.	20	47	41	3 Mar. (62)	2 Mon.	144·7746	794·1023	234·2015		3739
19 Mar. (78)	5 Thur.	2	59	50	20 Feb. (51)	6 Fri.	20·4975	641·3463	203·3783		3740
19 Mar. (78)	6 Fri.	9	11	59	11 Mar. (70)	5 Thur.	55·1799	577·3398	254·6887		3741
18 Mar. (78)	0 Sat.	15	24	8	28 Feb. (59)	2 Mon.	9930·0027	424·5838	223·8655		3742
18 Mar. (77)	1 Sun.	21	36	17	18 Mar. (77)	1 Sun.	9965·5851	360·5774	275·1759		3743
19 Mar. (78)	3 Tues.	3	48	26	7 Mar. (66)	5 Thur.	9841·3081	207·8213	244·3527		3744
19 Mar. (78)	4 Wed.	10	0	35	25 Feb. (56)	3 Tues.	55·6628	91·3571	216·2673		3745
18 Mar. (78)	5 Thur.	16	12	44	15 Mar. (75)	2 Mon.	90·3451	27·3506	267·5776		3746
18 Mar. (77)	6 Fri.	22	24	53	4 Mar. (63)	6 Fri.	9966·0680	873·8747	236·7545		3747

†† See "Remarks," above, on page preceding the Table.

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
1	2	3	3*a*	4	5	6	7	8
3748	569	704	53		646-47	37 Śōbhana . . .		4 Āshāḍha .
3749	570	705	54		647-48	38 Krōdhin . . .		...
3750	571	706	55		*648-49	39 Viśvāvasu† . . .		...
3751	572	707	56		649-50	41 *Plavaṅga* . . .		2 Vaiśākha .
3752	573	708	57		650-51	42 *Kīlaka* . .		...
3753	574	709	58		651-52	43 *Saumya* . . .		6 Bhādrapada.
3754	575	710	59		*352-53	44 *Sādhāraṇa* . . .		...
3755	576	711	60		653-54	45 *Virōdhakṛit* . . .		...
3756	577	712	61		654-55	46 Paridhāvin . . .		4 Āshāḍha .
3757	578	713	62		655-56	47 Pramādin . . .		...
3758	579	714	63		*656-57	48 Ānanda . . .		...
3759	580	715	64		657-58	49 Rākshasa . . .		3 Jyēshṭha .
3760	581	716	65		658-59	50 Anala . . .		...
3761	582	717	66		659-60	51 Piṅgala . . .		7 Āśvina .
3762	583	718	67		*660-61	52 Kālayukta . . .		...
3763	584	719	68		661-62	53 Siddhārthin . . .		...
3764	585	720	69		662-63	54 Raudra . . .		5 Śrāvaṇa .
3765	586	721	70		663-64	55 Durmati . . .		...
3766	587	722	71		*664-65	56 Dundubhi . . .		...
3767	588	723	72		665-66	57 Rudhirōdgārin . .		4 Āshāḍha
3768	589	724	73		666-67	58 Raktāksha . . .		...
3769	590	725	74		667-68	59 Krōdhana . . .		...
3770	591	726	75		*668-69	60 Kshaya . . .		1 Chaitra
3771	592	727	76		669-70	1 Prabhava . . .		...
3772	593	728	77		670-71	2 Vibhava . . .		5 Śrāvaṇa .

† 40 Parābhava was suppressed.

LXXXII—*Contd.*

COMMENCEMENT OF THE											Kali.
Solar year.					Luni-solar year (mean sunrise of civil day on which Chaitra śukla 1 ends).						
Day and month A. D.	Week-day.	Time of true Mēsha-saṁkrānti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
19 Mar. (78)	1 Sun.	4	37	2	22 Feb. (53)	4 Wed.	180·4229	758·1223	208·6691		3748
19 Mar. (78)	2 Mon.	10	49	11	13 Mar. (72)	3 Tues.	215·1052	694·1237	259·9795		3749
18 Mar. (78)	3 Tues.	17	1	20	1 Mar. (61)	0 Sat.	90·8281	541·3679	229·1662		3750
18 Mar. (77)	4 Wed.	23	13	29	18 Feb. (49)	4 Wed.	9966·5509	388·6119	198·3330		3751
19 Mar. (78)	6 Fri.	5	25	38	9 Mar. (68)	3 Tues.	1·2333	324·6053	249·6435		3752
19 Mar. (78)	0 Sat.	11	37	47	26 Feb. (57)	0 Sat.	9876·9561	171·8494	218·8203		3753
18 Mar. (78)	1 Sun.	17	49	56	16 Mar. (76)	6 Fri.	9911·6385	107·8429	270·1306		3754
19 Mar. (78)	3 Tues.	0	2	5	6 Mar. (65)	4 Wed.	125·9934	991·3786	242·0453		3755
19 Mar. (78)	4 Wed.	6	14	14	23 Feb. (54)	1 Sun.	1·7162	838·6227	211·2221		3756
19 Mar. (78)	5 Thur.	12	26	23	14 Mar. (73)	0 Sat.	36·3986	774·6161	262·5325		3757
18 Mar. (78)	6 Fri.	18	38	32	3 Mar. (63)	5 Thur.	250·7534	658·1518	234·4470		3758
19 Mar. (78)	1 Sun.	0	50	41	20 Feb. (51)	2 Mon.	126·5803	505·3958	203·6238		3759
19 Mar. (78)	2 Mon.	7	2	50	10 Mar. (69)	0 Sat.	9822·5266	405·0977	252·1965		3760
19 Mar. (78)	3 Tues.	13	14	59	28 Feb. (59)	5 Thur.	36·8815	288·6334	224·1110		3761
18 Mar. (78)	4 Wed.	19	27	8	17 Mar. (77)	3 Tues.	9732·9319	188·3353	272·6836		3762
19 Mar. (78)	6 Fri.	1	39	17	7 Mar. (66)	1 Sun.	9947·2867	71·8709	244·5982		3763
19 Mar. (78)	0 Sat.	7	51	26	25 Feb. (56)	6 Fri.	161·6415	955·4066	216·5129		3764
19 Mar. (78)	1 Sun.	14	3	35	16 Mar. (75)	5 Thur.	196·2239	891·4001	267·8232		3765
18 Mar. (78)	2 Mon.	20	15	44	4 Mar. (64)	2 Mon.	72·0468	738·6441	237·0000		3766
19 Mar. (78)	4 Wed.	2	27	53	21 Feb. (52)	6 Fri.	9947·7696	585·8882	206·1768		3767
19 Mar. (78)	5 Thur.	8	40	2	12 Mar. (71)	5 Thur.	9982·6410	521·8817	257·4873		3768
19 Mar. (78)	6 Fri.	14	52	11	1 Mar. (60)	2 Mon.	9858·1749	369·1257	226·6640		3769
18 Mar. (78)	0 Sat.	21	4	20	18 Feb. (49)	6 Fri.	9733·8977	216·3699	195·8407		3770
19 Mar. (78)	2 Mon.	3	16	29	8 Mar. (67)	5 Thur.	9768·5801	152·5632	247·1512		3771
19 Mar. (78)	3 Tues.	9	28	38	26 Feb. (57)	3 Tues.	9982·9349	35·8889	219·0659		3772

TABLE

CONCURRENT YEAR.								Intercalated (*adhika* and suppressed (*kshaya*) true lunar months.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8
3773	594	729	78		671-72	3 Śukla		...
3774	595	730	79		*672-73	4 Pramōda		...
3775	596	731	80		673-74	5 Prajāpati		4 Āshāḍha
3776	597	732	81		674-75	6 Aṅgirasa		...
3777	598	733	82		675-76	7 Śrīmukha		...
3778	599	734	83		*676-77	8 Bhāva		2 Vaiśākha
3779	600	735	84		677-78	9 Yuvan		...
3780	601	736	85		678-79	10 Dhātṛi		7 Āśvina
3781	602	737	86		679-80	11 Īśvara		...
3782	603	738	87		*680-81	12 Bahudhānya		...
3783	604	739	88		681-82	13 Pramāthin		5 Śrāvaṇa
3784	605	740	89		682-83	14 Vikrama		...
3785	606	741	90		683-84	15 Vṛisha		...
3786	607	742	91		*684-85	16 Chitrabhānu		3 Jyōshṭha
3787	608	743	92		685-86	17 Subhānu		...
3788	609	744	93		686-87	18 Tāraṇa		...
3789	610	745	94		687-88	19 Pārthiva		1 Chaitra
3790	611	746	95		*688-89	20 Vijaya		...
3791	612	747	96		689-90	21 Sarvajit		5 Śrāvaṇa
3792	613	748	97		690-91	22 Sarvadhārin		...
3793	614	749	98		691-92	23 Virōdhin		...
3794	615	750	99		*692-93	24 Vikṛita		4 Āshāḍha
3795	616	751	100		693-94	25 Khara		...
3796	617	752	101		694-95	26 Nandana		...
3797	618	753	102		695-96	27 Vijaya		2 Vaiśākha

LXXXII—*Contd.*

COMMENCEMENT OF THE											
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						Kali.
Day and month A. D.	Week-day.	Time of true Mēsha-saṁkrānti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
19 Mar. (78)	4 Wed.	15	40	47	17 Mar. (76)	2 Mon.	17·6173	971·8924	270·3762		3773
18 Mar. (78)	5 Thur.	21	52	56	6 Mar. (66)	0 Sat. .	231·9621	855·4281	242·2907		3774
19 Mar. (78)	0 Sat. .	4	5	5	23 Feb. (54)	4 Wed.	107·6950	702·6722	211·4676		3775
19 Mar. (78)	1 Sun. .	10	17	14	14 Mar. (73)	3 Tues.	142·3774	628·6656	262·7781		3776
19 Mar. (78)	2 Mon.	16	29	23	3 Mar. (62)	0 Sat. .	18·1001	485·9097	231·9548		3777
18 Mar. (78)	3 Tues.	22	41	31	20 Feb. (51)	4 Wed.	9893·8230	333·1537	201·1315		3778
19 Mar. (78)	5 Thur.	4	53	40	10 Mar. (69)	3 Tues.	9928·5054	269·1472	252·4420		3779
19 Mar. (78)	6 Fri. .	11	5	49	27 Feb. (58)	0 Sat. .	9804·2283	116·3913	221·6188		3780
19 Mar. (78)	0 Sat. .	17	17	58	18 Mar. (77)	6 Fri. .	9838·9106	52·4848	272·9202		3781
18 Mar. (78)	1 Sun. .	23	30	7	7 Mar. (67)	4 Wed.	53·2655	935·9205	244·8437		3782
19 Mar. (78)	3 Tues.	5	42	16	25 Feb. (56)	2 Mon.	267·6203	819·4561	216·7584		3783
19 Mar. (78)	4 Wed.	11	54	25	16 Mar. (75)	1 Sun. .	302·3027	755·4496	268·0688		3784
19 Mar. (78)	5 Thur.	18	6	34	5 Mar. (64)	5 Thur.	178·0255	602·6936	237·5456		3785
19 Mar. (79)	0 Sat. .	0	18	43	22 Feb. (53)	2 Mon.	53·7384	449·9378	206·4223		3786
19 Mar. (78)	1 Sun. .	6	30	52	12 Mar. (71)	1 Sun. .	88·4308	385·9312	257·7328		3787
19 Mar. (78)	2 Mon.	12	43	1	1 Mar. (60)	5 Thur.	9964·1536	233·1752	227·1096		3788
19 Mar. (78)	3 Tues.	18	55	10	18 Feb. (49)	2 Mon.	9839·8765	80·4194	196·0863		3789
19 Mar. (79)	5 Thur.	1	7	19	8 Mar. (68)	1 Sun. .	9874·5589	16·4127	247·3967		3790
19 Mar. (78)	6 Fri. .	7	19	28	26 Feb. (57)	6 Fri. .	88·9137	899·9484	219·3114		3791
19 Mar. (78)	0 Sat. .	13	31	37	17 Mar. (76)	5 Thur.	123·5960	835·9419	270·6218		3792
19 Mar. (78)	1 Sun. .	19	43	46	6 Mar. (65)	2 Mon.	9999·3189	683·1860	239·7986		3793
19 Mar. (79)	3 Tues.	1	55	55	24 Feb. (55)	0 Sat. .	213·6738	566·7217	211·7131		3794
19 Mar. (78)	4 Wed.	8	8	4	13 Mar. (72)	5 Thur.	9909·7241	466·4235	260·1858		3795
19 Mar. (78)	5 Thur.	14	20	13	2 Mar. (61)	2 Mon.	9785·4470	313·6675	229·4626		3796
19 Mar. (78)	6 Fri. .	20	32	22	20 Feb. (51)	0 Sat. .	9999·8018	197·2632	201·3771		3797

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TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	
1	2	3	3*a*	4	5	6	7	8
3798	619	754	103		*696-97	28 Jaya		...
3799	620	755	104		697-98	29 Manmatha . . .		6 Bhādrapada
3800	621	756	105		698-99	30 Durmukha . .		...
3801	622	757	106		699-700	31 Hēmalamba . .		...
3802	623	758	107		*700-70	32 Vilamba . . .		5 Śrāvaṇa .
3803	624	759	108		701-02	33 Vikārin . . .		...
3804	625	760	109		702-03	34 Śārvarin . . .		...
3805	626	761	110		703-04	35 Plava		3 Jyēshṭha .
3806	627	762	111		*704-05	36 Śubhakṛit . . .		...
3807	628	763	112		705-06	37 Sōbhana . . .		...
3808	629	764	113		706-07	38 Krōdhin . . .		1 Chaitra .
3809	630	765	114		707-08	39 Viśvāvasu . . .		...
3810	631	766	115		*708-09	40 Parābhava . . .		5 Śrāvaṇa .
3811	632	767	116		709-10	41 Plavaṅga . . .		...
3812	633	768	117		710-11	42 Kīlaka . . .		...
3813	634	769	118		711-12	43 Saumya . . .		4 Āshāḍha .
3814	635	770	119		*712-13	44 Sādhāraṇa . . .		...
3815	636	771	120		713-14	45 Virōdhakṛit . . .		...
3816	637	772	121		714-15	46 Paridhāvin . . .		2 Vaiśākha .
3817	638	773	122		715-16	47 Pramādin . . .		...
3818	639	774	123		*716-17	48 Ānanda . . .		6 Bhādrapada
3819	640	775	124		717-18	49 Rākshasa . . .		...
3820	641	776	125		718-19	50 Anala		...
3821	642	777	126		719-20	51 Piṅgala . . .		5 Śrāvaṇa .
3822	643	778	127		*720-21	52 Kālayukta . . .		...

LXXXII—*Contd.*

COMMENCEMENT OF THE											
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						Kali.
Day and month A. D.	Week-day.	Time of true Mēsha-saṁkrānti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
19 Mar. (79)	1 Sun.	2	44	31	10 Mar. (70)	6 Fri.	34·4841	133·1967	252·6875		3798
19 Mar. (78)	2 Mon.	8	56	40	27 Feb. (58)	3 Tues.	9910·2070	980·4408	221·8643		3799
19 Mar. (78)	3 Tues.	15	8	49	18 Mar. (77)	2 Mon.	9944·8894	916·4343	273·1748		3800
19 Mar. (78)	4 Wed.	21	20	58	8 Mar. (67)	0 Sat.	159·2443	799·9700	245·0671		3801
19 Mar. (79)	6 Fri.	3	33	7	25 Feb. (56)	4 Wed.	34·9671	647·2140	214·2440		3802
19 Mar. (78)	0 Sat.	9	45	16	15 Mar. (74)	3 Tues.	69·6496	583·2074	265·5543		3803
19 Mar. (78)	1 Sun.	15	57	25	4 Mar. (63)	0 Sat.	9945·3723	430·4516	234·7311		3804
19 Mar. (78)	2 Mon.	22	9	34	21 Feb. (52)	4 Wed.	9821·0852	277·6956	203·9079		3805
19 Mar. (79)	4 Wed.	4	21	43	11 Mar. (71)	3 Tues.	9855·7776	213·6890	255·2184		3806
19 Mar. (78)	5 Thur.	10	33	52	1 Mar. (60)	1 Sun.	70·1324	97·2248	227·1329		3807
19 Mar. (78)	6 Fri.	16	46	1	18 Feb. (49)	5 Thur.	9946·0956	944·4986	196·3096		3808
19 Mar. (78)	0 Sat.	22	58	10	9 Mar. (68)	4 Wed.	9980·5376	880·4623	247·6201		3809
19 Mar. (79)	2 Mon.	5	10	19	27 Feb. (58)	2 Mon.	194·8924	773·9979	219·5348		3810
19 Mar. (78)	3 Tues.	11	22	28	17 Mar. (76)	1 Sun.	230·5748	699·9914	270·8451		3811
19 Mar. (78)	4 Wed.	17	34	37	6 Mar. (65)	5 Thur.	105·2977	547·2355	240·0219		3812
19 Mar. (78)	5 Thur.	23	46	46	23 Feb. (54)	2 Mon.	9981·0206	394·4796	209·1987		3813
19 Mar. (79)	0 Sat.	5	58	55	13 Mar. (73)	1 Sun.	15·7029	330·4730	260·5092		3814
19 Mar. (78)	1 Sun.	12	11	4	2 Mar. (61)	5 Thur.	9891·4258	178·7171	229·6859		3815
19 Mar. (78)	2 Mon.	18	23	13	20 Feb. (51)	3 Tues.	105·7806	61·2528	201·6004		3816
20 Mar. (79)	4 Wed.	0	35	22	11 Mar. (70)	2 Mon.	140·4629	997·2402	252·9100		3817
19 Mar. (79)	5 Thur.	6	47	31	28 Feb. (59)	6 Fri.	16·1858	844·4903	222·0877		3818
19 Mar. (78)	6 Fri.	12	59	40	18 Mar. (77)	5 Thur.	50·8682	780·4838	273·3981		3819
19 Mar. (78)	0 Sat.	19	11	49	8 Mar. (67)	3 Tues.	265·2231	664·0195	245·3126		3820
20 Mar. (79)	2 Mon.	1	23	58	25 Feb. (56)	0 Sat.	140·9458	511·2635	214·4895		3821
19 Mar. (79)	3 Tues.	7	36	7	14 Mar. (74)	5 Thur.	9836·9963	410·9654	263·0622		3822

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8
3823	644	779	128		721-22	53 Siddhārthin . . .		...
3824	645	780	129		722-23	54 Raudra . . .		3 Jyēshṭha
3825	646	781	130		723-24	55 Durmati . . .		...
3826	647	782	131		*724-25	56 Dundubhi . .		7 Āśvina 9 *Mārgaś.* (*ksh*)
3827	648	783	132		725-26	57 Rudhirōdgārin . .		1 Chaitra .
3828	649	784	133		726-27	58 Raktāksha . . .		...
3829	650	785	134		727-28	59 Krōdhana . . .		5 Śrāvaṇa .
3830	651	786	135		*728-29	60 Kshaya . . .		...
3831	652	787	136		729-30	1 Prabhava . .		...
3832	653	788	137		730-31	2 Vibhava . .		4 Āshāḍha
3833	654	789	138		731-32	3 Śukla . . .		...
3834	655	790	139		*732-33	4 Pramōda . . .		...
3835	656	791	140		733-34	5 Prajāpati . . .		2 Vaiśākha .
3836	657	792	141		734-35	6 Aṅgirasa† . . .		...
3837	658	793	142		735-36	8 *Bhāva*		6 Bhādrapada
3838	659	794	143		*736-37	9 *Yuvan* . . .		...
3839	660	795	144		737-38	10 *Dhātṛi* . . .		...
3840	661	796	145		738-39	11 *Īśvara*		5 Śrāvaṇa .
3841	662	797	146		739-40	12 Bahudhānya . .		...
3842	663	798	147		*740-41	13 Pramāthin . . .		...
3843	664	799	148		741-42	14 Vikrama . . .		3 Jyēshṭha .
3844	665	800	149		742-43	15 Vṛisha . . .		...
3845	666	801	150		743-44	16 Chitrabhānu .		7 Āśvina 11 *Māgha* (*ksh*)
3846	667	802	151		*744-45	17 Subhānu . . .		1 Chaitra .
3847	668	803	152		745-46	18 Tāraṇa . . .		...

† 7 Śrīmukha was suppressed.

LXXXII—*Contd.*

COMMENCEMENT OF THE										Kali.
Solar year.					Luni-solar year (mean sunrise of civil day on which Chaitra śukla 1 ends).					
Day and month A. D.	Week-day.	Time of true Mêsha-saṁkrânti.			Day and month A. D.	Week-day.	*a*	*b*	*c*	
13	14	17			19	20	23	24	25	1
		H.	M.	S.						
19 Mar. (78)	4 Wed.	13	48	15	4 Mar. (63)	3 Tues.	51·3511	294·5011	234·9767	3823
19 Mar. (78)	5 Thur.	20	0	24	21 Feb. (52)	0 Sat.	9927·0739	141·7452	204·1534	3824
20 Mar. (79)	0 Sat.	2	12	33	12 Mar. (71)	6 Fri.	9961·7563	77·7385	255·4693	3825
19 Mar. (79)	1 Sun.	8	24	42	1 Mar. (61)	4 Wed.	176·1112	961·2743	227·3785	3826
19 Mar. (78)	2 Mon.	14	36	51	18 Feb. (49)	1 Sun.	51·8342	808·5184	196·5552	3827
19 Mar. (78)	3 Tues.	20	49	0	9 Mar. (68)	0 Sat.	86·5163	744·5118	247·8656	3828
20 Mar. (79)	5 Thur.	3	1	9	26 Feb. (57)	4 Wed.	9962·2392	591·7559	217·0425	3829
19 Mar. (79)	6 Fri.	9	13	18	16 Mar. (76)	3 Tues.	9996·9216	527·7493	268·3529	3830
19 Mar. (78)	0 Sat.	15	25	27	5 Mar. (64)	0 Sat.	9872·6444	374·9934	237·5297	3831
19 Mar. (78)	1 Sun.	21	37	36	22 Feb. (53)	4 Wed.	9748·3673	222·2374	206·7064	3832
20 Mar. (79)	3 Tues.	3	49	45	13 Mar. (72)	3 Tues.	9783·0497	158·2309	258·0169	3833
19 Mar. (79)	4 Wed.	10	1	54	2 Mar. (62)	1 Sun.	9997·4046	41·7666	229·9215	3834
19 Mar. (78)	5 Thur.	16	14	3	20 Feb. (51)	6 Fri.	211·7493	925·3023	201·8460	3835
19 Mar. (78)	6 Fri.	22	26	12	11 Mar. (70)	5 Thur.	246·4417	861·2958	253·1564	3836
20 Mar. (79)	1 Sun.	4	38	21	28 Feb. (59)	2 Mon.	122·1646	708·5398	222·3332	3837
19 Mar. (79)	2 Mon.	10	50	30	18 Mar. (78)	1 Sun.	156·8460	644·5333	274·6437	3838
19 Mar. (78)	3 Tues.	17	2	39	7 Mar. (66)	5 Thur.	32·5698	501·7773	242·8204	3839
19 Mar. (78)	4 Wed.	23	14	48	24 Feb. (55)	2 Mon.	9908·2926	339·0214	211·9973	3840
20 Mar. (79)	6 Fri.	5	26	57	15 Mar. (74)	1 Sun.	9942·9751	275·0149	263·2077	3841
19 Mar. (79)	0 Sat.	11	39	6	3 Mar. (63)	5 Thur.	9818·6978	122·2588	232·4845	3842
19 Mar. (78)	1 Sun.	17	51	15	21 Feb. (52)	3 Tues.	33·0527	5·7947	204·3990	3843
20 Mar. (79)	3 Tues.	0	3	24	12 Mar. (71)	2 Mon.	67·7351	941·7880	255·7105	3844
20 Mar. (79)	4 Wed.	6	15	33	2 Mar. (61)	0 Sat.	282·0900	825·3238	227·6240	3845
19 Mar. (79)	5 Thur.	12	27	42	19 Feb. (50)	4 Wed.	157·8127	672·5678	196·8007	3846
19 Mar. (78)	6 Fri.	18	39	51	9 Mar. (68)	3 Tues.	192·4951	608·5613	248·1112	3847

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	JOVIAN SAṀVATSARA.		
						Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8
3848	669	804	153		746-47	19 Pārthiva		5 Śrāvaṇa
3849	670	805	154		747-48	20 Vyaya		...
3850	671	806	155		*748-49	21 Sarvajit		...
3851	672	807	156		749-50	22 Sarvadhārin		3 Jyēshṭha
3852	673	808	157		750-51	23 Virōdhin		...
3853	674	809	158		751-52	24 Vikṛita		...
3854	675	810	159		*752-53	25 Khara		2 Vaiśākha
3855	676	811	160		753-54	26 Nandana		...
3856	677	812	161		754-55	27 Vijaya		6 Bhādrapada
3857	678	813	162		755-56	28 Jaya		...
3858	679	814	163		*756-57	29 Manmatha		...
3859	680	815	164		757-58	30 Durmukha		4 Āshāḍha
3860	681	816	165		758-59	31 Hēmalamba		...
3861	682	817	166		759-60	32 Vilamba		...
3862	683	818	167		*760-61	33 Vikārin		3 Jyēshṭha
3863	684	819	168		761-62	34 Śārvarin		...
3864	685	820	169		762-63	35 Plava		7 Āśvina
3865	686	821	170		763-64	36 Śubhakṛit		...
3866	687	822	171		*764-65	37 Śōbhana		...
3867	688	823	172		765-66	38 Krōdhin		5 Śrāvaṇa
3868	689	824	173		766-67	39 Viśvāvasu		...
3869	690	825	174		767-68	40 Parābhava		...
3870	691	826	175		*768-69	41 Plavaṅga		3 Jyēshṭha
3871	692	827	176		769-70	42 Kīlaka		...
3872	693	828	177		770-71	43 Saumya		...

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American Oriental Society, New Haven, Connecticut, U. S. America.

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Royal Colonial Institute, Northumberland Avenue, London, W.C.

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Imperial Archæological Society, ditto.

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Imperial Academy of Science, Vienna.

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Bombay Branch of the Royal Asiatic Society, Bombay.
Secretariat Library, Calcutta.
Indian Museum, ditto.
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Museum Library, ditto.
Secretariat Library, Rangoon.
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Itihasa Somsodhak Mandal, Poona.
Museum Library, Lucknow.
The Mythic Society, Bangalore.
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Government College Library, Kumbakonam.
Pachaiyappa's College Library, Madras.
The Connemara Public Library, Madras.
Sanskrit College Library, Mylapore.
Government College Library, Rajahmundry.
Maharajah's College Library, Trivandrum.
Sanskrit College Library, Tiruvadi (Tanjore).
Maharajah's College Library, Vizayanagaram.
Elphinstone College Library, Bombay.
Prince of Wales Museum Library, Bombay.
St. Xavier's College, Bombay.
Deccan College Library, Poona.
Burdwan Raj Public Library, Burdwan.
Bangiya Sahitya Parishad Sabha, Calcutta.
Chaitanya Library, 4-1, Beadon Street, Calcutta.
Mahabodhi Society, Baniapooker Lane, Calcutta.
Scottish Churches College Library, Calcutta.
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Rajshahi College Library, Rajshahi.
Provincial Library, Dacca.
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Secretariat Library, Bihar and Orissa.
Patna College Library, Bankipore.
Agra College Library, Agra.
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Central Hindu College Library, Benares.
Queen's College Library, Benares.
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Archæological Museum Library, Muttra.
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Government College Library, Lahore.
Punjab Historical Society, Lahore.
Punjab Public Library, Lahore.
Museum Library, Delhi.
Public Library, Delhi.
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Secretariat Library, Peshawar.
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LXXXII—*Contd.*

COMMENCEMENT OF THE											
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						Kali.
Day and month A. D.	Week-day.	Time of true Mēsha-saṁkrānti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
20 Mar. (79)	1 Sun. .	0	52	0	26 Feb. (57)	0 Sat. .	68·2180	455·8054	217·2881		3848
20 Mar. (79)	2 Mon.	7	4	9	17 Mar. (76)	6 Fri. .	102·9003	391·7988	268·4984		3849
19 Mar. (79)	3 Tues.	13	16	18	5 Mar. (65)	3 Tues.	9978·6232	239·0429	237·7752		3850
19 Mar. (78)	4 Wed.	19	28	27	22 Feb. (53)	0 Sat. .	9854·3461	86·2869	206·9520		3851
20 Mar. (79)	6 Fri. .	1	40	36	13 Mar. (72)	6 Fri. .	9889·0285	22·2804	258·2625		3852
20 Mar. (79)	0 Sat. .	7	52	45	3 Mar. (62)	4 Wed.	103·3833	905·8161	230·1770		3853
19 Mar. (79)	1 Sun. .	14	4	54	21 Feb. (52)	2 Mon.	317·7384	789·3518	202·0915		3854
19 Mar. (78)	2 Mon.	20	17	3	10 Mar. (69)	0 Sat. .	13·7885	689·0537	250·6642		3855
20 Mar. (79)	4 Wed.	2	29	12	28 Feb. (59)	5 Thur.	228·1433	572·5894	222·5788		3856
20 Mar. (79)	5 Thur.	8	41	21	18 Mar. (77)	3 Tues.	9924·1937	472·2911	271·1514		3857
19 Mar. (79)	6 Fri. .	14	53	30	6 Mar. (66)	0 Sat. .	9799·9166	319·5352	240·3282		3858
19 Mar. (78)	0 Sat. .	21	5	39	24 Feb. (55)	5 Thur.	14·2714	203·0709	212·2428		3859
20 Mar. (79)	2 Mon.	3	17	48	15 Mar. (74)	4 Wed.	48·9538	139·0644	263·5533		3860
20 Mar. (79)	3 Tues.	9	29	57	4 Mar. (63)	1 Sun. .	9924·6766	986·3084	232·7300		3861
19 Mar. (79)	4 Wed.	15	42	6	22 Feb. (53)	6 Fri. .	139·0315	869·8442	204·6445		3862
19 Mar. (78)	5 Thur.	21	54	15	12 Mar. (71)	5 Thur.	173·7138	805·8377	255·9550		3863
20 Mar. (79)	0 Sat. .	4	6	24	1 Mar. (60)	2 Mon.	49·4367	653·0816	225·1318		3864
20 Mar. (79)	1 Sun. .	10	18	33	20 Mar. (79)	1 Sun. .	84·1191	589·0751	276·4422		3865
19 Mar. (79)	2 Mon.	16	30	42	8 Mar. (68)	5 Thur.	9959·8420	436·3192	245·6189		3866
19 Mar. (78)	3 Tues.	22	42	51	25 Feb. (56)	2 Mon.	9835·5647	283·5633	214·7958		3867
20 Mar. (79)	5 Thur.	4	55	0	16 Mar. (75)	1 Sun. .	9870·2472	219·5567	266·1062		3868
20 Mar. (79)	6 Fri. .	11	7	8	6 Mar. (65)	6 Fri. .	84·6020	103·0923	238·0208		3869
19 Mar. (79)	0 Sat. .	17	19	17	23 Feb. (54)	3 Tues.	9960·3248	950·3365	207·1975		3870
19 Mar. (78)	1 Sun. .	23	31	26	13 Mar. (72)	2 Mon.	999[illegible]·0072	886·3299	258·5080		3871
20 Mar. (79)	3 Tues.	5	43	35	3 Mar. (62)	0 Sat. .	209·3621	769·8656	230·4226		3872

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
Kali.	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A. D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3*a*	4	5	6	7	8
3873	694	829	178		771-72	44 Sâdhâraṇa . . .		2 Vaiśâkha .
3874	695	830	179		*772-73	45 Virôdhakṛit . . .		...
3875	696	831	180		773-74	46 Paridhâvin . . .		6 Bhâdrapada
3876	697	832	181		774-75	47 Pramâdin . . .		...
3877	698	833	182		775-76	48 Ânanda . . .		...
3878	699	834	183		*776-77	49 Râkshasa . . .		4 Âshâḍha .
3879	700	835	184		777-78	50 Anala		...
3880	701	836	185		778-79	51 Piṅgala . . .		...
3881	702	837	186		779-80	52 Kâlayukta . . .		3 Jyêshṭha
3882	703	838	187		*780-81	53 Siddhârthin . . .		...
3883	704	839	188		781-82	54 Raudra . . .		7 Âśvina .
3884	705	840	189		782-83	55 Durmati . . .		...
3885	706	841	190		783-84	56 Dundubhi . . .		...
3886	707	842	191		*784-85	57 Rudhirôdgârin . .		5 Śrâvaṇa .
3887	708	843	192		785-86	58 Raktâksha . . .		...
3888	709	844	193		786-87	59 Krôdhana . . .		...
3889	710	845	194		787-88	60 Kshaya . . .		3 Jyêshṭha .
3890	711	846	195		*788-89	1 Prabhava . .		...
3891	712	847	196		789-90	2 Vibhava . . .		...
3892	713	848	197		790-91	3 Śukla		2 Vaiśâkha .
3893	714	849	198		791-92	4 Pramôda . . .		...
3894	715	850	199		*792-93	5 Prajâpati . . .		6 Bhâdrapada
3895	716	851	200		793-94	6 Aṅgiras . . .		...
3896	717	852	201		794-95	7 Śrîmukha . . .		...
3897	718	853	202		795-96	8 Bhâva . . .		4 Âshâḍha .

LXXXII—*Contd.*

COMMENCEMENT OF THE										Kali.
Solar year.					Luni-solar year (mean sunrise of civil day on which Chaitra śukla 1 ends).					
Day and month A. D.	Week-day.	Time of true Mêsha-saṁkrānti.			Day and month A. D.	Week-day.	*a*	*b*	*c*	
13	14	17			19	20	23	24	25	1
		H.	M.	S.						
20 Mar. (79)	4 Wed. .	11	55	44	20 Feb. (51)	4 Wed. .	75·0849	617·1097	199·5993	3873
19 Mar. (79)	5 Thur. .	18	7	53	10 Mar. (70)	3 Tues. .	119·7672	553·1032	250·9097	3874
20 Mar. (79)	0 Sat. .	0	20	2	27 Feb. (58)	0 Sat. .	9995·4901	400·3472	220·0866	3875
20 Mar. (79)	1 Sun. .	6	32	11	18 Mar. (77)	6 Fri. .	30·1725	336·3306	271·3970	3876
20 Mar. (79)	2 Mon. .	12	44	20	7 Mar. (66)	3 Tues. .	9905·8953	183·5848	240·5738	3877
19 Mar. (79)	3 Tues. .	18	56	29	25 Feb. (56)	1 Sun. .	120·2501	67·1204	212·4883	3878
20 Mar. (79)	5 Thur. .	1	8	38	15 Mar. (74)	0 Sat. .	154·9326	3·1139	263·7988	3879
20 Mar. (79)	6 Fri. .	7	20	47	4 Mar. (63)	4 Wed. .	30·6554	850·3579	232·9756	3880
20 Mar. (79)	0 Sat. .	13	32	56	22 Feb. (53)	2 Mon. .	245·0102	733·8937	204·8901	3881
19 Mar. (79)	1 Sun. .	19	45	5	12 Mar. (72)	1 Sun. .	279·6926	669·8872	256·2005	3882
20 Mar. (79)	3 Tues. .	1	57	14	1 Mar. (60)	5 Thur. .	155·4155	517·1311	225·3773	3883
20 Mar. (79)	4 Wed. .	8	9	23	19 Mar. (78)	3 Tues. .	9851·4659	416·8330	273·9500	3884
20 Mar. (79)	5 Thur. .	14	21	32	8 Mar. (67)	0 Sat. .	9727·1887	264·0770	243·1167	3885
19 Mar. (79)	6 Fri. .	20	33	41	26 Feb. (57)	5 Thur. .	9941·5435	147·6128	215·0413	3886
20 Mar. (79)	1 Sun. .	2	45	50	16 Mar. (75)	4 Wed. .	9976·2260	83·6062	266·3517	3887
20 Mar. (79)	2 Mon. .	8	57	59	6 Mar. (65)	2 Mon. .	190·5807	967·1418	238·2664	3888
20 Mar. (79)	3 Tues. .	15	10	8	23 Feb. (54)	6 Fri. .	66·3036	814·3852	207·4431	3889
19 Mar. (79)	4 Wed. .	21	22	17	13 Mar. (73)	5 Thur. .	100·9860	750·3794	258·7535	3890
20 Mar. (79)	6 Fri. .	3	34	26	2 Mar. (61)	2 Mon. .	9976·7089	597·6235	227·9303	3891
20 Mar. (79)	0 Sat. .	9	46	35	19 Feb. (50)	6 Fri. .	9852·4317	444·8676	197·1071	3892
20 Mar. (79)	1 Sun. .	15	58	44	10 Mar. (69)	5 Thur. .	9887·1140	380·8610	248·4175	3893
19 Mar. (79)	2 Mon. .	22	10	53	27 Feb. (58)	2 Mon. .	9762·8369	228·1051	218·4943	3894
20 Mar. (79)	4 Wed. .	4	23	2	17 Mar. (76)	1 Sun. .	9797·5192	164·0986	268·9047	3895
20 Mar. (79)	5 Thur. .	10	35	11	7 Mar. (66)	6 Fri. .	11·8741	47·6342	240·8194	3896
20 Mar. (79)	6 Fri. .	16	47	20	25 Feb. (56)	4 Wed.	226·2289	931·1699	212·7339	3897

x 2

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
1	2	3	3a	4	5	6	7	8
3898	719	854	203		*796-97		9 Yuvan . . .	...
3899	720	855	204		797-98		10 Dhātṛi . . .	...
3900	721	856	205		798-99		11 Īśvara . . .	3 Jyēshṭha .
3901	722	857	206		799-800		12 Bahudhānya . .	...
3902	723	858	207		*800-01		13 Pramāthin . . .	7 Āśvina .
3903	724	859	208		801-02		14 Vikrama . . .	...
3904	725	860	209		802-03		15 Vṛisha . . .	...
3905	726	861	210		803-04		16 Chitrabhānu . .	5 Śrāvaṇa .
3906	727	862	211		*804-05		17 Subhānu . . .	...
3907	728	863	212		805-06		18 Tāraṇa . . .	...
3908	729	864	213		*806-07		19 Pārthiva . . .	3 Jyēshṭha .
3909	730	865	214		807-08		20 Vyaya . . .	...
3910	731	866	215		*808-09		21 Sarvajit . . .	...
3911	732	867	216		809-10		22 Sarvadhārin . .	1 Chaitra .
3912	733	868	217		810-11		23 Virōdhin . . .	...
3913	734	869	218		811-12		24 Vikṛita . . .	5 Śrāvaṇa .
3914	735	870	219		*812-13		25 Khara . . .	...
3915	736	871	220		813-14		26 Nandana . . .	...
3916	737	872	221		814-15		27 Vijaya . . .	4 Āshāḍha .
3917	738	873	222		815-16		28 Jaya . . .	...
3918	739	874	223		*816-17		29 Manmatha . . .	...
3919	740	875	224		817-18		30 Durmukha . . .	3 Jyēshṭha .
3920	741	876	225		818-19		31 Hēmalamba . .	...
3921	742	877	226		819-20		32 Vilamba† . . .	7 Āśvina .
3922	743	878	227		*820-21		34 Śārvarin . . .	...

† 33 Vikārin was suppressed.

LXXXII—*Contd.*

COMMENCEMENT OF THE											Kali.
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						
Day and month A. D.	Week-day.	Time of true Mêsha-saṁkrânti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
19 Mar. (79)	0 Sat.	22	59	29	15 Mar. (75)	3 Tues.	260·9113	867·1634	264·0442		3898
20 Mar. (79)	2 Mon.	5	11	38	4 Mar. (63)	0 Sat.	136·6341	714·4074	233·2211		3899
20 Mar. (79)	3 Tues.	11	23	47	21 Feb. (52)	4 Wed.	12·3570	561·6515	202·3979		3900
20 Mar. (79)	4 Wed.	17	35	56	12 Mar. (71)	3 Tues.	47·0394	497·6449	253·6621		3901
19 Mar. (79)	5 Thur.	23	48	5	19 Feb. (60)	0 Sat.	9922·7623	344·8890	222·8629		3902
20 Mar. (79)	0 Sat.	6	0	14	19 Mar. (78)	6 Fri.	9957·4347	280·8825	274·1733		3903
20 Mar. (79)	1 Sun.	12	12	23	8 Mar. (67)	3 Tues.	9833·1675	128·1265	243·3500		3904
20 Mar. (79)	2 Mon.	18	24	32	26 Feb. (57)	1 Sun.	47·5223	11·6622	215·2647		3905
20 Mar. (80)	4 Wed.	0	36	41	16 Mar. (76)	0 Sat.	82·2048	947·6557	266·5751		3906
20 Mar. (79)	5 Thur.	6	48	50	6 Mar. (65)	5 Thur.	296·5595	831·1914	238·4897		3907
20 Mar. (79)	6 Fri.	13	0	59	23 Feb. (54)	2 Mon.	172·2824	678·4354	207·6664		3908
20 Mar. (79)	0 Sat.	19	13	8	14 Mar. (73)	1 Sun.	206·9648	614·4289	258·9769		3909
20 Mar. (80)	2 Mon.	1	25	17	2 Mar. (62)	5 Thur.	82·6876	461·6730	228·1537		3910
20 Mar. (79)	3 Tues.	7	37	26	19 Feb. (50)	2 Mon.	9958·4105	308·9171	197·3304		3911
20 Mar. (79)	4 Wed.	13	49	35	10 Mar. (69)	1 Sun.	9993·0928	244·9104	248·6408		3912
20 Mar. (79)	5 Thur.	20	1	44	27 Feb. (58)	5 Thur.	9868·8157	92·1545	217·8177		3913
20 Mar. (80)	0 Sat.	2	13	52	17 Mar. (77)	4 Wed.	9903·4980	28·1481	269·1281		3914
20 Mar. (79)	1 Sun.	8	26	1	7 Mar. (66)	2 Mon.	117·8529	906·6837	251·0427		3915
20 Mar. (79)	2 Mon.	14	38	10	24 Feb. (55)	6 Fri.	9993·5758	758·9278	210·2194		3916
20 Mar. (79)	3 Tues.	20	50	19	15 Mar. (74)	5 Thur.	28·2581	694·9212	264·5299		3917
20 Mar. (80)	5 Thur.	3	2	28	3 Mar. (63)	2 Mon.	9903·9810	542·1653	230·7067		3918
20 Mar. (79)	6 Fri.	9	14	37	21 Feb. (52)	0 Sat.	118·3358	425·7009	202·6212		3919
20 Mar. (79)	0 Sat.	15	26	46	11 Mar. (70)	5 Thur.	9814·3862	325·4028	251·1938		3920
20 Mar. (79)	1 Sun.	21	38	55	1 Mar. (60)	3 Tues.	28·7410	208·9389	223·1084		3921
20 Mar. (80)	3 Tues.	3	51	4	19 Mar. (79)	2 Mon.	63·4234	144·9321	274·3989		3922

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
1	2	3	3a	4	5	6	7	8
3923	744	879	228		821-22	35 *Plava*		...
3924	745	880	229		822-23	36 *Śubhakṛit* . . .		5 Śrāvaṇa .
3925	746	881	230		823-24	37 *Śōbhana* . . .		...
3926	747	882	231		*824-25	38 Krōdhin . . .		...
3927	748	883	232	0-1	825-26	39 Viśvāvasu . . .		3 Jyēshṭha .
3928	749	884	233	1-2	826-27	40 Parābhava . . .		...
3929	750	885	234	2-3	827-28	41 Plavaṅga . . .		...
3930	751	886	235	3-4	*828-29	42 Kīlaka . . .		1 Chaitra .
3931	752	887	236	4-5	829-30	43 Saumya . . .		...
3932	753	888	237	5-6	830-31	44 Sādhāraṇa . . .		5 Śrāvaṇa .
3933	754	889	238	6-7	831-32	45 Virōdhakṛit . . .		...
3934	755	890	239	7-8	*832-33	46 Paridhāvin . . .		...
3935	756	891	240	8-9	833-34	47 Pramādin . . .		4 Āshāḍha .
3936	757	892	241	9-10	834-35	48 Ānanda . . .		...
3937	758	893	242	10-11	835-36	49 Rākshasa . . .		...
3938	759	894	243	11-12	*836-37	50 Anala		2 Vaiśākha .
3939	760	895	244	12-13	837-38	51 Piṅgala . . .		...
3940	761	896	245	13-14	838-39	52 Kālayukta . . .		6 Bhādrapada
3941	762	897	246	14-15	839-40	53 Siddhārthin . . .		...
3942	763	898	247	15-16	*840-41	54 Raudra . . .		...
3943	764	899	248	16-17	841-42	55 Durmati . . .		5 Śrāvaṇa
3944	765	900	249	17-18	842-43	56 Dundubhi . . .		...
3945	766	901	250	18-19	843-44	57 Rudhirōdgārin . .		...
3946	767	902	251	19-20	*844-45	58 Raktāksha . . .		3 Jyēshṭha .
3947	768	903	252	20-21	845-46	59 Krōdhana . . .		...

LXXXII—*Contd.*

COMMENCEMENT OF THE											Kali.
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						
Day and month A. D.	Week-day.	Time of true Mēsha-saṁkrānti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
20 Mar. (79)	4 Wed. .	10	3	13	8 Mar. (67)	6 Fri. .	9939·1463	992·1760	243·5956		3923
20 Mar. (79)	5 Thur. .	16	15	22	26 Feb. (57)	4 Wed. .	153·5010	875·7118	215·5102		3924
20 Mar. (79)	6 Fri. .	22	27	31	17 Mar. (76)	3 Tues. .	188·1834	811·7052	266·8206		3925
20 Mar. (80)	1 Sun. .	4	39	40	5 Mar. (65)	0 Sat. .	63·9063	658·9493	235·9975		3926
20 Mar. (79)	2 Mon. .	10	51	49	22 Feb. (53)	4 Wed. .	9939·6292	506·1933	205·1642		3927
20 Mar. (79)	3 Tues. .	17	3	58	13 Mar. (72)	3 Tues. .	9974·3115	442·1868	256·4846		3928
20 Mar. (79)	4 Wed. .	23	16	7	2 Mar. (61)	0 Sat. .	9850·0344	289·4309	225·6614		3929
20 Mar. (80)	6 Fri. .	5	28	16	20 Feb. (51)	5 Thur. .	64·6593	172·9666	197·5760		3930
20 Mar. (79)	0 Sat. .	11	40	25	10 Mar. (69)	4 Wed. .	98·8015	108·9590	248·8864		3931
20 Mar. (79)	1 Sun. .	17	52	34	27 Feb. (58)	1 Sun. .	9974·7944	956·2040	218·0632		3932
21 Mar. (80)	3 Tues. .	0	4	43	18 Mar. (77)	0 Sat. .	9·4768	892·1976	269·3736		3933
20 Mar. (80)	4 Wed. .	6	16	52	7 Mar. (67)	5 Thur. .	223·8317	775·7333	241·2883		3934
20 Mar. (79)	5 Thur. .	12	29	1	24 Feb. (55)	2 Mon. .	99·5545	622·9773	210·4650		3935
20 Mar. (79)	6 Fri. .	18	41	10	15 Mar. (74)	1 Sun. .	134·2369	558·9708	261·7754		3936
21 Mar. (80)	1 Sun. .	0	53	19	4 Mar. (63)	5 Thur. .	9·9598	406·2148	230·9522		3937
20 Mar. (80)	2 Mon. .	7	5	28	21 Feb. (52)	2 Mon. .	9885·6826	253·4589	200·1290		3938
20 Mar. (79)	3 Tues. .	13	17	37	11 Mar. (70)	1 Sun. .	9920·3649	189·4523	252·4294		3939
20 Mar. (79)	4 Wed. .	19	29	46	28 Feb. (59)	5 Thur. .	9796·0878	36·6964	220·6162		3940
21 Mar. (80)	6 Fri. .	1	41	55	20 Mar. (79)	5 Thur. .	169·4022	8·9816	274·6644		3941
20 Mar. (80)	0 Sat. .	7	54	4	8 Mar. (68)	2 Mon. .	45·1250	856·2255	243·8412		3942
20 Mar. (79)	1 Sun. .	14	6	13	26 Feb. (57)	0 Sat. .	259·4798	739·7613	215·7558		3943
20 Mar. (79)	2 Mon. .	20	18	22	17 Mar. (76)	6 Fri. .	294·1622	675·7547	267·0662		3944
21 Mar. (80)	4 Wed. .	2	30	31	6 Mar. (65)	3 Tues. .	169·8851	522·9988	236·0990		3945
20 Mar. (80)	5 Thur. .	8	42	40	23 Feb. (54)	0 Sat. .	45·5979	370·2428	205·4197		3946
20 Mar. (79)	6 Fri. .	14	54	49	12 Mar. (71)	5 Thur. .	9741·6583	269·9446	253·9924		3947

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8
3948	769	904	253	21-22	846-47	60 Kshaya . . .		...
3949	770	905	254	22-23	847-48	1 Prabhava . . .		1 Chaitra .
3950	771	906	255	23-24	*848-49	2 Vibhava . . .		...
3951	772	907	256	24-25	849-50	3 Śukla		5 Śrāvaṇa .
3952	773	908	257	25-26	850-51	4 Pramōda . . .		...
3953	774	909	258	26-27	851-52	5 Prajāpati . . .		...
3954	775	910	259	27-28	*852-53	6 Aṅgiras . . .		4 Āshāḍha .
3955	776	911	260	28-29	853-54	7 Śrīmukha . . .		...
3956	777	912	261	29-30	854-55	8 Bhāva . . .		...
3957	778	913	262	30-31	855-56	9 Yuvan . . .		2 Vaiśākha
3958	779	914	263	31-32	*856-57	10 Dhātṛi . . .		...
3959	780	915	264	32-33	857-58	11 Īśvara . . .		6 Bhādrapada
3960	781	916	265	33-34	858-59	12 Bahudhānya . .		...
3961	782	917	266	34-35	859-60	13 Pramāthin . . .		...
3962	783	918	267	35-36	*860-61	14 Vikrama . . .		5 Śrāvaṇa .
3963	784	919	268	36-37	861-62	15 Vṛisha . . .		...
3964	785	920	269	37-38	862-63	16 Chitrabhānu . .		...
3965	786	921	270	38-39	863-64	17 Subhānu . . .		3 Jyēshṭha
3966	787	922	271	39-40	*864-65	18 Tāraṇa . . .		...
3967	788	923	272	40-41	865-66	19 Pārthiva . .		{ 7 Āśvina 9 *Mārgaś : (ksh)* }
3968	789	924	273	41-42	866-67	20 Vyaya . . .		1 Chaitra .
3969	790	925	274	42-43	867-68	21 Sarvajit . . .		...
3970	791	926	275	43-44	*868-69	22 Sarvadhārin . . .		5 Śrāvaṇa .
3971	792	927	276	44-45	869-70	23 Virōdhin . . .		...
3972	793	928	277	45-46	870-71	24 Vikṛita . . .		...

LXXXII—*Contd.*

COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).					Kali.
Day and month A.D.	Week-day.	Time of true Mēsha-saṁkrānti.	Day and month A. D.	Week-day.	a	b	c	
13	14	17	19	20	23	24	25	1
		H. M. S.						
20 Mar. (79)	0 Sat.	21 6 58	2 Mar. (61)	3 Tues.	9956·0132	153·4804	226·0070	3948
21 Mar. (80)	2 Mon.	3 19 7	19 Feb. (50)	0 Sat.	9832·2167	0·7839	195·0837	3949
20 Mar. (80)	3 Tues.	9 31 16	10 Mar. (70)	0 Sat.	205·0503	973·0095	249·2319	3950
20 Mar. (79)	4 Wed.	15 43 25	27 Feb. (58)	4 Wed.	80·7732	820·2535	218·4088	3951
20 Mar. (79)	5 Thur.	21 55 34	18 Mar. (77)	3 Tues.	115·4556	756·2470	269·6192	3952
21 Mar. (80)	0 Sat.	4 7 43	7 Mar. (66)	0 Sat.	9991·1784	603·4911	238·7960	3953
20 Mar. (80)	1 Sun.	10 19 52	24 Feb. (55)	4 Wed.	9866·9013	450·7353	207·9727	3954
20 Mar. (79)	2 Mon.	16 32 1	14 Mar. (73)	3 Tues.	9900·5837	386·7286	259·2832	3955
20 Mar. (79)	3 Tues.	22 49 10	3 Mar. (62)	0 Sat.	9777·3065	233·9727	228·4600	3956
21 Mar. (80)	5 Thur.	4 56 19	21 Feb. (52)	5 Thur.	9991·6613	117·5084	200·3745	3957
20 Mar. (80)	6 Fri.	11 8 28	11 Mar. (71)	4 Wed.	26·3437	53·5018	251·6849	3958
20 Mar. (79)	0 Sat.	17 20 37	1 Mar. (60)	2 Mon.	240·4285	937·0375	223·5995	3959
20 Mar. (79)	1 Sun.	23 32 45	20 Mar. (79)	1 Sun.	275·3809	873·0310	274·9100	3960
21 Mar. (80)	3 Tues.	5 44 54	9 Mar. (68)	5 Thur.	151·1038	720·2751	244·0867	3961
20 Mar. (80)	4 Wed.	11 57 3	26 Feb. (57)	2 Mon.	26·8266	567·5191	213·2635	3962
20 Mar. (79)	5 Thur.	18 9 12	16 Mar. (75)	1 Sun.	61·5090	503·5126	264·5739	3963
21 Mar. (80)	0 Sat.	0 21 21	5 Mar. (64)	5 Thur.	9937·2318	350·7566	233·5708	3964
21 Mar. (80)	1 Sun.	6 33 30	22 Feb. (53)	2 Mon.	9812·9547	198·0007	202·9275	3965
20 Mar. (80)	2 Mon.	12 45 39	12 Mar. (72)	1 Sun.	9847·6371	132·9941	254·2379	3966
20 Mar. (79)	3 Tues.	18 57 48	2 Mar. (61)	6 Fri.	61·9919	17·5299	226·1525	3967
21 Mar. (80)	5 Thur.	1 9 57	19 Feb. (50)	3 Tues.	9937·7149	864·7741	195·3293	3968
21 Mar. (80)	6 Fri.	7 22 6	11 Mar. (70)	3 Tues.	311·0291	837·0590	249·3775	3969
20 Mar. (80)	0 Sat.	13 34 15	28 Feb. (59)	0 Sat.	186·7519	684·3031	218·5543	3970
20 Mar. (79)	1 Sun.	19 46 24	18 Mar. (77)	6 Fri.	221·4343	620·2965	269·8647	3971
21 Mar. (80)	3 Tues.	1 58 33	7 Mar. (66)	3 Tues.	97·1572	467·5406	239·0416	3972

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*Kshaya*) true lunar months.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	JOVIAN SAṀVATSARA.		
						Southern system.	Northern system.	
1	2	3	3*a*	4	5	6	7	8
3973	794	929	278	46-47	871-72	25 Khara . . .		4 Āshāḍha .
3974	795	930	279	47-48	*872-73	26 Nandana . . .		...
3975	796	931	280	48-49	873-74	27 Vijaya . . .		...
3976	797	932	281	49-50	874-75	28 Jaya . . .		2 Vaiśākha .
3977	798	933	282	50-51	875-76	29 Manmatha . .		...
3978	799	934	283	51-52	*876-77	30 Durmukha . .		6 Bhādrapada
3979	800	935	284	52-53	877-78	31 Hēmalamba . .		...
3980	801	936	285	53-54	878-79	32 Vilamba . . .		...
3981	802	937	286	54-55	879-80	33 Vikārin . . .		5 Śrāvaṇa .
3982	803	938	287	55-56	*880-81	34 Śārvarin . . .		...
3983	804	939	288	56-57	881-82	35 Plava . . .		...
3984	805	940	289	57-58	882-83	36 Śubhakṛit . . .		3 Jyēshṭha .
3985	806	941	290	58-59	*883-84	37 Śōbhana . . .		...
3986	807	942	291	59-60	*884-85	38 Krōdhin . .		7 Āśvina . 10 *Pausha* (*ksh.*)
3987	808	943	292	60-61	885-86	39 Viśvāvasu . .		1 Chaitra .
3988	809	944	293	61-62	886-87	40 Parābhava . .		...
3989	810	945	294	62-63	887-88	41 Plavaṅga . . .		5 Śrāvaṇa .
3990	811	946	295	63-64	*888-89	42 Kīlaka . . .		...
3991	812	947	296	64-65	889-90	43 Saumya . . .		...
3992	813	948	297	65-66	890-91	44 Sādhāraṇa . .		3 Jyēshṭha .
3993	814	949	298	66-67	891-92	45 Virōdhakṛit . .		...
3994	815	950	299	67-68	*892-93	46 Paridhāvin . .		...
3995	816	951	300	68-69	893-94	47 Pramādin . . .		2 Vaiśākha .
3996	817	952	301	69-70	894-95	48 Ānanda . . .		...
3997	818	953	302	70-71	895-96	49 Rākshasa . . .		6 Bhādrapada

LXXXII—*Contd.*

COMMENCEMENT OF THE											
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						Kali.
Day and month A. D.	Week-day.	Time of true Mêsha-saṁkrânti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
21 Mar. (80)	4 Wed. .	8	10	42	24 Feb. (55)	0 Sat. .	9972·8801	313·7846	208·2183		3973
20 Mar. (80)	5 Thur. .	14	22	51	14 Mar. (74)	6 Fri. .	7·5624	250·7781	259·5087		3974
20 Mar. (79)	6 Fri. .	20	35	0	3 Mar. (62)	3 Tues. .	9883·2853	98·0222	228·7055		3975
21 Mar. (80)	1 Sun. .	2	47	9	21 Feb. (52)	1 Sun. .	97·6401	981·5579	200·6101		3976
21 Mar. (80)	2 Mon. .	8	59	18	12 Mar. (71)	0 Sat. .	132·3224	917·5514	251·9305		3977
20 Mar. (80)	3 Tues. .	15	11	27	29 Feb. (60)	4 Wed. .	8·0453	764·7954	221·1072		3978
20 Mar. (79)	4 Wed. .	21	23	36	19 Mar. (78)	3 Tues. .	42·7277	700·7889	272·4177		3979
21 Mar. (80)	6 Fri. .	3	35	45	8 Mar. (67)	0 Sat. .	9918·4506	548·0330	241·5146		3980
21 Mar. (80)	0 Sat. .	9	47	54	26 Feb. (57)	5 Thur. .	132·8053	431·5686	213·5091		3981
20 Mar. (80)	1 Sun. .	16	0	3	15 Mar. (75)	3 Tues. .	9828·8558	331·2705	262·0817		3982
20 Mar. (79)	2 Mon. .	22	12	12	5 Mar. (64)	1 Sun. .	43·2106	214·8061	234·0013		3983
21 Mar. (80)	4 Wed. .	4	24	21	22 Feb. (53)	5 Thur. .	9918·9335	62·0502	203·1731		3984
21 Mar. (80)	5 Thur. .	10	36	30	13 Mar. (72)	4 Wed. .	9953·6158	998·0436	254·4835		3985
20 Mar. (80)	6 Fri. .	16	48	39	2 Mar. (62)	2 Mon. .	167·9707	881·5794	226·3980		3986
20 Mar. (79)	0 Sat. .	23	0	48	19 Feb. (50)	6 Fri. .	43·6936	728·9235	195·5748		3987
21 Mar. (80)	2 Mon. .	5	12	57	10 Mar. (69)	5 Thur. .	78·3759	664·8169	246·7165		3988
21 Mar. (80)	3 Tues. .	11	25	6	27 Feb. (58)	2 Mon. .	9954·0987	512·0610	216·0621		3989
20 Mar. (80)	4 Wed. .	17	37	15	17 Mar. (77)	1 Sun. .	9988·7811	448·0544	267·3724		3990
20 Mar. (79)	5 Thur. .	23	49	24	6 Mar. (65)	5 Thur. .	9864·5040	294·2984	236·5493		3991
21 Mar. (80)	0 Sat. .	6	1	33	23 Feb. (54)	2 Mon. .	9740·2268	142·5426	205·7261		3992
21 Mar. (80)	1 Sun. .	12	13	42	14 Mar. (73)	1 Sun. .	9774·9092	78·5360	257·0365		3993
20 Mar. (80)	2 Mon. .	18	25	51	3 Mar. (63)	6 Fri. .	9989·2641	962·0717	228·9510		3994
21 Mar. (80)	4 Wed. .	0	38	0	21 Feb. (52)	4 Wed. .	203·6198	845·6075	200·6968		3995
21 Mar. (80)	5 Thur. .	6	50	9	12 Mar. (71)	3 Tues. .	238·3012	781·6009	252·0073		3996
21 Mar. (80)	6 Fri. .	31	2	18	1 Mar. (60)	0 Sat. .	114·0241	628·8449	221·3528		3997

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
1	2	3	3a	4	5	6	7	8
3998	819	954	303	71-72	*896-97	50 Anala		...
3999	820	955	304	72-73	897-98	51 Piṅgala		...
4000	821	956	305	73-74	898-99	52 Kāluyukta		4 Āshāḍha
4001	822	957	306	74-75	899-900	53 Siddhārthin		...
4002	823	958	307	75-76	*900-01	54 Raudra		...
4003	824	959	308	76-77	901-02	55 Durmati		3 Jyēshṭha
4004	825	960	309	77-78	902-03	56 Dundubhi		...
4005	826	961	310	78-79	903-04	57 Rudhirōdgārin		7 Āśvina
4006	827	962	311	79-80	*904-05	58 Raktāksha†		...
4007	828	963	312	80-81	905-06	59 Krōdhana	60 *Kshaya*	...
4008	829	964	313	81-82	906-07	60 Kshaya	1 *Prabhava*	5 Śrāvaṇa
4009	830	965	314	82-83	907-08	1 Prabhava	2 *Vibhava*	...
4010	831	966	315	83-84	*908-09	2 Vibhava	3 *Śukla*	...
4011	832	967	316	84-85	909-10	3 Śukla	4 Pramōda	3 Jyēshṭha
4012	833	968	317	85-86	910-11	4 Pramōda	5 Prajāpati	...
4013	834	969	318	86-87	911-12	5 Prajāpati	6 Aṅgiras	...
4014	835	970	319	87-88	*912-13	6 Aṅgiras	7 Śrīmukha	2 Vaiśākha
4015	836	971	320	88-89	913-14	7 Śrīmukha	8 Bhāva	...
4016	837	972	321	89-90	914-15	8 Bhāva	9 Yuvan	6 Bhādrapada
4017	838	973	322	90-91	915-16	9 Yuvan	10 Dhātṛi	...
4018	839	974	323	91-92	*916-17	10 Dhātṛi	11 Īśvara	...
4019	840	975	324	92-93	917-18	11 Īśvara	12 Bahudhānya	4 Āshāḍha
4020	841	976	325	93-94	918-19	12 Bahudhānya	13 Pramāthin	...
4021	842	977	326	94-95	919-20	13 Pramāthin	14 Vikrama	...
4022	843	978	327	95-96	*920-21	14 Vikrama	15 Vṛisha	3 Jyēshṭha

† 59 Krōdhana was suppressed in the North. By Southern reckoning there was no suppression, nor has there been any such since.

LXXXII—*Contd.*

COMMENCEMENT OF THE											
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						Kali.
Day and month A. D.	Week-day.	Time of true Mēsha-saṁkrānti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
20 Mar. (80)	0 Sat. .	19	14	27	19 Mar. (79)	6 Fri. .	148·7064	564·8384	272·6632		3998
21 Mar. (80)	2 Mon. .	1	26	36	8 Mar. (67)	3 Tues. .	24·4293	412·0825	241·8401		3999
21 Mar. (80)	3 Tues. .	7	38	45	25 Feb. (56)	0 Sat. .	9900·1522	259·3266	211·0169		4000
21 Mar. (80)	4 Wed. .	13	50	54	16 Mar. (75)	6 Fri. .	9934·8345	195·3200	262·3050		4001
20 Mar. (80)	5 Thur. .	20	3	3	4 Mar. (64)	3 Tues. .	9810·5573	42·5640	231·4818		4002
21 Mar. (80)	0 Sat. .	2	15	12	22 Feb. (53)	1 Sun. .	24·9122	926·0997	203·3963		4003
21 Mar. (80)	1 Sun. .	8	27	21	13 Mar. (72)	0 Sat. .	59·5945	862·0930	254·7067		4004
21 Mar. (80)	2 Mon. .	14	29	29	3 Mar. (62)	5 Thur. .	273·9494	745·6289	226·6213		4005
20 Mar. (80)	3 Tues. .	20	51	38	20 Mar. (80)	3 Tues. .	9969·9998	645·3307	275·1940		4006
21 Mar. (80)	5 Thur. .	3	3	47	10 Mar. (69)	1 Sun. .	184·3546	528·8665	247·1085		4007
21 Mar. (80)	6 Fri. .	9	15	56	27 Feb. (58)	5 Thur. .	60·0774	376·1105	216·2853		4008
21 Mar. (80)	0 Sat. .	15	28	5	17 Mar. (76)	3 Tues. .	9756·1279	275·8123	264·8579		4009
20 Mar. (80)	1 Sun. .	21	40	14	6 Mar. (66)	1 Sun. .	9970·4827	159·3479	236·7726		4010
21 Mar. (80)	3 Tues. .	3	52	23	23 Feb. (54)	5 Thur. .	9846·2055	6·5921	205·9493		4011
21 Mar. (80)	4 Wed. .	10	4	32	14 Mar. (73)	4 Wed. .	9880·8879	942·5855	257·2597		4012
21 Mar. (80)	5 Thur. .	16	16	41	4 Mar. (63)	2 Mon. .	95·2428	826·1212	229·1743		4013
20 Mar. (80)	6 Fri. .	22	28	50	22 Feb. (53)	0 Sat. .	309·5975	709·6569	201·0889		4014
21 Mar. (80)	1 Sun. .	4	40	59	11 Mar. (70)	5 Thur. .	5·6479	609·3587	249·6615		4015
21 Mar. (80)	2 Mon. .	10	53	8	28 Feb. (59)	2 Mon. .	9881·3708	456·6028	218·8383		4016
21 Mar. (80)	3 Tues. .	17	5	17	19 Mar. (78)	1 Sun. .	9916·0531	392·5962	270·1487		4017
20 Mar. (80)	4 Wed. .	23	17	26	7 Mar. (67)	5 Thur. .	9791·7760	239·8403	239·3256		4018
21 Mar. (80)	6 Fri. .	5	29	35	25 Feb. (56)	3 Tues. .	6·1309	123·3760	211·2401		4019
21 Mar. (80)	0 Sat. .	11	41	44	16 Mar. (75)	2 Mon. .	40·8133	59·3695	262·5505		4020
21 Mar. (80)	1 Sun. .	17	53	53	5 Mar. (64)	6 Fri. .	9916·5360	906·6135	231·6273		4021
21 Mar. (81)	3 Tues. .	0	6	2	23 Feb. (54)	4 Wed. .	130·8909	790·1493	203·6419		4022

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3*a*	4	5	6	7	8
4023	844	979	328	96-97	921-22	15 Vṛisha . .	16 Chitrabhānu .	...
4024	845	980	329	97-98	922-23	16 Chitrabhānu .	17 Subhānu .	7 Āśvina .
4025	846	981	330	98-99	923-24	17 Subhānu .	18 Tāraṇa .	...
4026	847	982	331	99-100	*924-25	18 Tāraṇa . .	19 Pārthiva .	...
4027	848	983	332	100-01	925-26	19 Pārthiva .	20 Vyaya . .	5 Śrāvaṇa .
4028	849	984	333	101-02	926-27	20 Vyaya . .	21 Sarvajit .	...
4029	850	985	334	102-03	927-28	21 Sarvajit .	22 Sarvadhārin .	...
4030	851	986	335	103-04	*928-29	22 Sarvadhārin .	23 Virōdhin .	3 Jyēshṭha .
4031	852	987	336	104-05	929-30	23 Virōdhin .	24 Vikṛita .	...
4032	853	988	337	105-06	930-31	24 Vikṛita . .	25 Khara . .	...
4033	854	989	338	106-07	931-32	25 Khara . .	26 Nandana .	2 Vaiśākha .
4034	855	990	339	107-08	*932-33	26 Nandana .	27 Vijaya . .	...
4035	856	991	340	108-09	933-34	27 Vijaya . .	28 Jaya . .	6 Bhādrapada
4036	857	992	341	109-10	934-35	28 Jaya . .	29 Manmatha .	...
4037	858	993	342	110-11	935-36	29 Manmatha .	30 Durmukha .	...
4038	859	994	343	111-12	*936-37	30 Durmukha .	31 Hēmalamba .	4 Āshāḍha .
4039	860	995	344	112-13	937-38	31 Hēmalamba .	32 Vilamba .	...
4040	861	996	345	113-14	938-39	32 Vilamba .	33 Vikārin .	...
4041	862	997	346	114-15	939-40	33 Vikārin .	34 Śārvarin .	3 Jyēshṭha .
4042	863	998	347	115-16	*940-41	34 Śārvarin .	35 Plava . .	...
4043	864	999	348	116-17	941-42	35 Plava . .	36 Śubhakṛit .	7 Āśvina .
4044	865	1000	349	117-18	942-43	36 Śubhakṛit .	37 Śōbhana .	...
4045	866	1001	350	118-19	943-44	37 Śōbhana .	38 Krōdhin .	...
4046	867	1002	351	119-20	*944-45	38 Krōdhin .	39 Viśvāvasu .	5 Śrāvaṇa .
4047	868	1003	352	120-21	945-46	39 Viśvāvasu .	40 Parābhava .	...

LXXXII—*Contd.*

COMMENCEMENT OF THE											
Solar year.					Luni-solar year (mean sunrise of civil day on which Chaitra śukla 1 ends).						Kali.
Day and month A. D.	Week-day.	Time of true Mēsha-saṁkrānti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
21 Mar. (80)	4 Wed.	6	18	11	13 Mar. (72)	3 Tues.	165·5733	726·1427	254·9523		4023
21 Mar. (80)	5 Thur.	12	30	20	2 Mar. (61)	0 Sat.	41·2961	573·3868	224·1290		4024
21 Mar. (80)	6 Fri.	18	42	29	21 Mar. (80)	6 Fri.	75·9785	509·3802	275·4395		2025
21 Mar. (81)	1 Sun.	0	54	38	9 Mar. (69)	3 Tues.	9951·7014	356·6243	244·6163		4026
21 Mar. (80)	2 Mon.	7	6	47	26 Feb. (57)	0 Sat.	9827·4242	203·8683	213·7931		4027
21 Mar. (80)	3 Tues.	13	18	56	17 Mar. (76)	6 Fri.	9862·0966	139·8618	265·1034		4028
21 Mar. (80)	4 Wed.	19	31	5	7 Mar. (66)	4 Wed.	76·4614	23·3975	237·0181		4029
21 Mar. (81)	6 Fri.	1	43	14	24 Feb. (55)	1 Sun.	9952·1843	870·6416	206·1949		4030
21 Mar. (80)	0 Sat.	7	55	23	14 Mar (73)	0 Sat.	9986·8666	806·6351	257·5053		4031
21 Mar. (80)	1 Sun.	14	7	32	4 Mar. (63)	5 Thur.	201·2215	690·1707	229·4198		4032
21 Mar. (80)	2 Mon.	20	19	41	21 Feb. (52)	2 Mon.	76·9443	537·4148	198·5966		4033
21 Mar. (81)	4 Wed.	2	31	50	11 Mar. (71)	1 Sun.	111·6267	473·4083	249·9071		4034
21 Mar. (80)	5 Thur.	8	43	59	28 Feb. (59)	5 Thur.	9987·3495	320·6523	219·0839		4035
21 Mar. (80)	6 Fri.	14	56	8	19 Mar. (78)	4 Wed.	22·0319	256·0458	270·3942		4036
21 Mar. (80)	0 Sat.	21	8	17	8 Mar. (67)	1 Sun.	9897·7548	103·8898	239·5711		4037
21 Mar. (81)	2 Mon.	3	20	26	26 Feb. (57)	6 Fri.	112·1097	987·4256	211·4857		4038
21 Mar. (80)	3 Tues.	9	32	35	16 Mar. (75)	5 Thur.	146·7920	923·4190	262·7961		4039
21 Mar. (80)	4 Wed.	15	44	44	5 Mar. (64)	2 Mon.	22·5148	770·6630	231·9729		4040
21 Mar. (80)	5 Thur.	21	56	53	23 Feb. (54)	0 Sat.	236·8697	654·1988	203·8874		4041
21 Mar. (81)	0 Sat.	4	9	2	12 Mar. (72)	5 Thur.	9932·9200	553·9006	252·4601		4042
21 Mar. (80)	1 Sun.	10	21	11	1 Mar. (60)	2 Mon.	9808·6429	401·1447	221·6368		4043
21 Mar. (80)	2 Mon.	16	33	20	20 Mar. (79)	1 Sun.	9843·3253	337·1381	272·9473		4044
21 Mar. (80)	3 Tues.	22	45	29	9 Mar. (68)	5 Thur.	9719·0482	184·3821	242·1240		4045
21 Mar. (81)	5 Thur.	4	57	38	27 Feb. (58)	3 Tues.	9933·4029	67·9178	214·0386		4046
21 Mar. (80)	6 Fri.	11	9	47	17 Mar. (76)	2 Mon.	9968·0854	3·9113	265·3490		4047

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshadi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8
4048	869	1004	353	121-22	946-47	40 Parābhava .	41 Plavaṅga .	...
4049	870	1005	354	122-23	947-48	41 Plavaṅga .	42 Kīlaka . .	3 Jyēshṭha .
4050	871	1006	355	123-24	*948-49	42 Kīlaka . .	43 Saumya .	...
4051	872	1007	356	124-25	949-50	43 Saumya .	44 Sādhāraṇa .	...
4052	873	1008	357	125-26	950-51	44 Sādhāraṇa .	45 Virōdhakṛit .	1 Chaitra .
4053	874	1009	358	126-27	951-52	45 Virōdhakṛit	46 Paridhāvin .	...
4054	875	1010	359	127-28	*952-53	46 Paridhāvin .	47 Pramādin .	5 Śrāvaṇa .
4055	876	1011	360	128-29	953-54	47 Pramādin .	48 Ānanda .	...
4056	877	1012	361	129-30	954-55	48 Ānanda .	49 Rākshasa .	...
4057	878	1013	362	130-31	955-56	49 Rākshasa .	50 Anala . .	4 Āshāḍha .
4058	879	1014	363	131-32	*956-57	50 Anala . .	51 Piṅgala .	...
4059	880	1015	364	132-33	957-58	51 Piṅgala .	52 Kālayukta .	...
4060	881	1016	365	133-34	958-59	52 Kālayukta .	53 Siddhārthin .	3 Jyēshṭha .
4061	882	1017	366	134-35	959-60	53 Siddhārthin .	54 Raudra .	...
4062	883	1018	367	135-36	*960-61	54 Raudra .	55 Durmati .	7 Āśvina .
4063	884	1019	368	136-37	961-62	55 Durmati .	56 Dundubhi .	...
4064	885	1020	369	137-38	962-63	56 Dundubhi .	57 Rudhirōdgārin	...
4065	886	1021	370	138-39	963-64	57 Rudhirōdgārin	58 Raktāksha .	4 Āshāḍha† .
4066	887	1022	371	139-40	*964-65	58 Raktāksha .	59 Krōdhana .	...
4067	888	1023	372	140-41	965-66	59 Krōdhana .	60 Kshaya .	...
4068	889	1024	373	141-42	966-67	60 Kshaya .	1 Prabhava .	3 Jyēshṭha
4069	890	1025	374	142-43	967-68	1 Prabhava .	2 Vibhava .	...
4070	891	1026	375	143-44	*968-69	2 Vibhava .	3 Śukla . .	12 Phālguna† .
4071	892	1027	376	144-45	969-70	3 Śukla . .	4 Pramōda .	...
4072	893	1028	377	145-46	970-71	4 Pramōda .	5 Prajāpati .	...

† See "Remarks" above, on the page preceding the Table.

LXXXII—*Contd.*

COMMENCEMENT OF THE											
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						Kali.
Day and month A. D.	Week-day.	Time of true Mêsha-saṁkrânti.			Day and month, A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
21 Mar. (80)	0 Sat.	17	21	56	7 Mar. (66)	0 Sat.	182·4402	887·4470	237·2637		4048
21 Mar. (80)	1 Sun.	23	34	5	24 Feb. (55)	4 Wed.	58·1630	734·6910	206·4404		4049
21 Mar. (81)	3 Tues.	5	46	13	14 Mar. (74)	3 Tues.	92·8454	670·6846	257·7508		4050
21 Mar. (80)	4 Wed.	11	58	22	3 Mar. (62)	0 Sat.	9968·5683	517·9286	226·9276		4051
21 Mar. (80)	5 Thur.	18	10	31	20 Feb. (51)	4 Wed.	9844·3112	365·1727	196·1044		4052
22 Mar. (81)	0 Sat.	0	22	40	11 Mar. (70)	3 Tues.	9878·9735	301·1662	247·4148		4053
21 Mar. (81)	1 Sun.	6	34	49	28 Feb. (59)	0 Sat.	9754·6963	148·4102	216·5916		4054
21 Mar. (80)	2 Mon.	12	46	58	18 Mar. (77)	6 Fri.	9789·3787	84·4037	267·9020		4055
21 Mar. (80)	3 Tues.	18	59	7	8 Mar. (67)	4 Wed.	3·7335	967·9394	239·8167		4056
22 Mar. (81)	5 Thur.	1	11	16	26 Feb. (57)	2 Mon.	218·0884	851·4750	211·7312		4057
21 Mar. (81)	6 Fri.	7	23	25	16 Mar. (76)	1 Sun.	252·7708	787·4685	263·0416		4058
21 Mar. (80)	0 Sat.	13	35	34	5 Mar. (64)	5 Thur.	128·4936	634·7125	232·2184		4059
21 Mar. (80)	1 Sun.	19	47	43	22 Feb. (53)	2 Mon.	4·2164	481·9566	201·3952		4060
22 Mar. (81)	3 Tues.	1	59	52	13 Mar. (72)	1 Sun.	38·8988	417·9502	252·7056		4061
21 Mar. (81)	4 Wed.	8	12	1	1 Mar. (61)	5 Thur.	9914·6217	265·1942	221·8823		4062
21 Mar. (80)	5 Thur.	14	24	10	20 Mar. (79)	4 Wed.	9949·3040	201·1877	273·1828		4063
21 Mar. (80)	6 Fri.	20	36	19	9 Mar. (68)	1 Sun.	9825·0269	48·5316	242·3696		4064
22 Mar. (81)	1 Sun.	2	48	28	27 Feb. (58)	6 Fri.	39·3817	931·9674	214·2842		4065
21 Mar. (81)	2 Mon.	9	0	37	17 Mar. (77)	5 Thur.	74·0642	867·9608	265·5946		4066
21 Mar. (80)	3 Tues.	15	12	46	7 Mar. (66)	3 Tues.	288·4189	751·4956	237·5093		4067
21 Mar. (80)	4 Wed.	21	24	55	24 Feb. (55)	0 Sat.	164·1418	598·7406	206·6860		4068
22 Mar. (81)	6 Fri.	3	37	4	15 Mar. (74)	6 Fri.	198·8042	534·7341	257·9964		4069
21 Mar. (81)	0 Sat.	9	49	13	3 Mar. (63)	3 Tues.	74·5470	381·9782	227·1731		4070
21 Mar. (80)	1 Sun.	16	1	22	21 Mar. (80)	1 Sun.	9770·5974	281·6799	275·7458		4071
21 Mar. (80)	2 Mon.	22	13	31	11 Mar. (70)	6 Fri.	9984·9522	616·2156	247·6604		4072

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
						JOVIAN SAMVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8
4073	894	1029	378	146-47	971-72	5 Prajāpati .	6 Aṅgiras .	5 Śrāvaṇa .
4074	895	1030	379	147-48	*972-73	6 Aṅgiras .	7 Śrīmukha .	...
4075	896	1031	380	148-49	973-74	7 Śrīmukha .	8 Bhāva . .	...
4076	897	1032	381	149-50	974-75	8 Bhāva . .	9 Yuvan . .	4 Āshāḍha .
4077	898	1033	382	150-51	975-76	9 Yuvan . .	10 Dhātṛi . .	...
4078	899	1034	383	151-52	*976-77	10 Dhātṛi . .	11 Īśvara . .	...
4079	900	1035	384	152-53	977-78	11 Īśvara . .	12 Bahudhānya .	2 Vaiśākha .
4080	901	1036	385	153-54	978-79	12 Bahudhānya .	13 Pramāthin .	...
4081	902	1037	386	154-55	979-80	13 Pramāthin .	14 Vikrama .	6 Bhādrapada
4082	903	1038	387	155-56	*980-81	14 Vikrama .	15 Vṛisha . .	...
4083	904	1039	388	156-57	981-82	15 Vṛisha . .	16 Chitrabhānu .	...
4084	905	1040	389	157-58	982-83	16 Chitrabhānu .	17 Subhānu .	4 Āshāḍha†† .
4085	906	1041	390	158-59	983-84	17 Subhānu .	18 Tāraṇa . .	...
4086	907	1042	391	159-60	*984-85	18 Tāraṇa . .	19 Pārthiva .	...
4087	908	1043	392	160-61	985-86	19 Pārthiva .	20 Vyaya . .	3 Jyēshṭha .
4088	909	1044	393	161-62	986-87	20 Vyaya . .	21 Sarvajit .	...
4089	910	1045	394	162-63	987-88	21 Sarvajit .	22 Sarvadhārin .	...
4090	911	1046	395	163-64	*988-89	22 Sarvadhārin .	23 Virōdhin .	1 Chaitra .
4091	912	1047	396	164-65	989-90	23 Virōdhin .	24 Vikṛita† .	...
4092	913	1048	397	165-66	990-91	24 Vikṛita . .	26 *Nandana* .	5 Śrāvaṇa .
4093	914	1049	398	166-67	991-92	25 Khara .	27 *Vijaya* . .	...
4094	915	1050	399	167-68	*992-93	26 Nandana .	28 *Jaya* . .	...
4095	916	1051	400	168-69	993-94	27 Vijaya . .	29 *Manmatha* .	4 Āshāḍha .
4096	917	1052	401	169-70	994-95	28 Jaya . .	30 *Durmukha* .	...
4097	918	1053	402	170-71	995-96	29 Manmatha .	31 Hēmalamba .	...

† 25 Khara was suppressed in the north.
†† See "Remarks" on page preceding the Table.

LXXXII—*Contd.*

COMMENCEMENT OF THE											
SOLAR YEAR					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).					Kali.
Day and month A. D.	Week-day.	Time of true Mêsha-saṁkrânti.			Day and month A. D.	Week-day.	*a*	*b*	*c*	
13	14	17			19	20	23	24	25	1
		H.	M.	S.						
22 Mar. (81)	4 Wed.	4	25	40	28 Feb. (59)	3 Tues.	9860·6751	12·4597	217·8372	4073
21 Mar. (81)	5 Thur.	10	37	49	18 Mar. (78)	2 Mon.	9895·3574	948·4532	268·0475	4074
21 Mar. (80)	6 Fri.	16	49	58	8 Mar. (67)	0 Sat.	109·7123	831·9889	240·0622	4075
21 Mar. (80)	0 Sat.	23	2	7	25 Feb. (56)††	4 Wed.	9985·4352	679·2329	209·2390	4076
22 Mar. (81)	2 Mon.	5	14	16	16 Mar. (75)	3 Tues.	20·1175	615·2264	260·5494	4077
21 Mar. (81)	3 Tues.	11	26	25	4 Mar. (64)	0 Sat.	9895·8404	462·4704	229·7261	4078
21 Mar. (80)	4 Wed.	17	38	34	21 Feb. (52)	4 Wed.	9771·5632	309·7145	198·9029	4079
21 Mar. (80)	5 Thur.	23	50	43	12 Mar. (71)	3 Tues.	9806·2456	245·7080	250·2134	4080
22 Mar. (81)	0 Sat.	6	2	52	2 Mar. (61)	1 Sun.	20·6004	129·2437	222·1279	4081
21 Mar. (81)	1 Sun.	12	15	1	20 Mar. (80)	0 Sat.	55·2828	65·2372	273·4383	4082
21 Mar. (80)	2 Mon.	18	27	10	9 Mar. (68)	4 Wed.	9931·0057	912·4811	242·6151	4083
22 Mar. (81)	4 Wed.	0	39	19	27 Feb. (58)	2 Mon.	145·3605	796·0169	214·5298	4084
22 Mar. (81)	5 Thur.	6	51	28	18 Mar. (77)	1 Sun.	180·0429	732·0103	265·8401	4085
21 Mar. (81)	6 Fri.	13	3	37	6 Mar. (66)	5 Thur.	55·7657	579·2544	235·0169	4086
21 Mar. (80)	0 Sat.	19	15	46	23 Feb. (54)	2 Mon.	9931·4886	426·4985	204·1937	4087
22 Mar. (81)	2 Mon.	1	27	55	11 Mar. (73)	1 Sun.	9966·1709	362·4919	255·5042	4088
22 Mar. (81)	3 Tues.	7	40	4	3 Mar. (62)	5 Thur.	9841·8938	209·7360	224·6809	4089
21 Mar. (81)	4 Wed.	13	52	13	21 Feb. (52)	3 Tues.	56·2487	93·2717	196·5954	4090
21 Mar. (80)	5 Thur.	20	4	22	11 Mar. (70)	2 Mon.	90·8310	29·2651	247·9059	409
22 Mar. (81)	0 Sat.	2	16	31	28 Feb. (59)	6 Fri.	9966·6538	876·5093	217·0828	4092
22 Mar. (81)	1 Sun.	8	28	40	19 Mar. (78)	5 Thur.	1·3372	812·5027	268·3931	4093
21 Mar. (81)	2 Mon.	14	40	49	8 Mar. (66)	3 Tues.	215·6911	696·0384	240·3077	4094
21 Mar. (80)	3 Tues.	20	52	58	25 Feb. (56)	0 Sat.	91·4139	543·2825	209·4845	4095
22 Mar. (81)	5 Thur.	3	5	6	16 Mar. (75)	6 Fri.	126·0053	479·2759	260·7950	4096
22 Mar. (81)	6 Fri.	9	17	15	5 Mar. (64)	3 Tues.	1·8192	326·5199	229·9717	4097

†† See "Remarks" on page preceding the Table.

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3*a*	4	5	6	7	8
4098	919	1054	403	171-72	*996-97	30 Durmukha	32 Vilamba	2 Vaiśākha
4099	920	1055	404	172-73	997-98	31 Hēmalamba	33 Vikārin	...
4100	921	1056	405	173-74	998-99	32 Vilamba	34 Śārvarin	6 Bhādrapada
4101	922	1057	406	174-75	999-1000	33 Vikārin	35 Plava	...
4102	923	1058	407	175-76	*1000-01	34 Śārvarin	36 Śubhakṛit	...
4103	924	1059	408	176-77	1001-02	35 Plava	37 Śōbhana	5 Śrāvaṇa†
4104	925	1060	409	177-78	1002-03	36 Śubhakṛit	38 Krōdhin	...
4105	926	1061	410	178-79	1003-04	37 Śōbhana	39 Viśvāvasu	...
4106	927	1062	411	179-80	*1004-05	38 Krōdhin	40 Parābhava	3 Jyēshṭha
4107	928	1063	412	180-81	1005-06	39 Viśvāvasu	41 Plavaṅga	...
4108	929	1064	413	181-82	1006-07	40 Parābhava	42 Kīlaka	8 Kārttika 9 *Mārgaś*:(*ksh.*)
4109	930	1065	414	182-83	1007-08	41 Plavaṅga	43 Saumya	1 Chaitra
4110	931	1066	415	183-84	*1008-09	42 Kīlaka	44 Sādhāraṇa	...
4111	932	1067	416	184-85	1009-10	43 Saumya	45 Virōdhakṛit	5 Śrāvaṇa
4112	933	1068	417	185-86	1010-11	44 Sādhāraṇa	46 Paridhāvin	...
4113	934	1069	418	186-87	1011-12	45 Virōdhakṛit	47 Pramādin	...
4114	935	1070	419	187-88	*1012-13	46 Paridhāvin	48 Ānanda	4 Āshāḍha
4115	936	1071	420	188-89	1013-14	47 Pramādin	49 Rākshasa	...
4116	937	1072	421	189-90	1014-15	48 Ānanda	50 Anala	...
4117	938	1073	422	190-91	1015-16	49 Rākshasa	51 Piṅgala	2 Vaiśākha
4118	939	1074	423	191-92	*1016-17	50 Anala	52 Kālayukta	...
4119	940	1075	424	192-93	1017-18	51 Piṅgala	53 Siddhārthin	6 Bhādrapada
4120	941	1076	425	193-94	1018-19	52 Kālayukta	54 Raudra	...
4121	942	1077	426	194-95	1019-20	53 Siddhārthin	55 Durmati	...
4122	943	1078	427	195-96	*1020-21	54 Raudra	56 Dundubhi	5 Śrāvaṇa†

† See "Remarks" on page preceding the Table.

LXXXII—*Contd.*

COMMENCEMENT OF THE											
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						Kali.
Day and month A. D.	Week-day.	Time of true Mêsha-saṁkrânti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
21 Mar. (81)	0 Sat.	15	29	24	22 Feb. (53)	0 Sat.	9877·5419	173·7640	199·1484		4098
21 Mar. (80)	1 Sun.	21	41	33	12 Mar. (71)	6 Fri.	9912·2243	109·7575	251·4589		4099
22 Mar. (81)	3 Tues.	3	53	42	2 Mar. (61)	4 Wed.	126·5792	993·2933	222·3735		4100
22 Mar. (81)	4 Wed.	10	5	51	21 Mar. (80)	3 Tues.	161·2616	929·2867	273·6618		4101
21 Mar. (81)	5 Thur.	16	18	0	9 Mar. (69)	0 Sat.	36·9845	776·5307	242·8385		4102
21 Mar. (80)	6 Fri.	22	30	9	27 Feb. (58)	5 Thur.	251·3393	660·0664	214·7531		4103
22 Mar. (81)	1 Sun.	4	42	18	17 Mar. (76)	3 Tues.	9947·3897	559·7683	263·3257		4104
22 Mar. (81)	2 Mon.	10	54	27	6 Mar. (65)	0 Sat.	9823·1125	407·0122	232·5025		4105
21 Mar. (81)	3 Tues.	17	6	36	24 Feb. (55)	5 Thur.	37·4674	290·5480	204·4171		4106
21 Mar. (80)	4 Wed.	23	18	45	13 Mar. (72)	3 Tues.	9733·5177	190·2498	253·9897		4107
22 Mar. (81)	6 Fri.	5	30	54	3 Mar. (62)	1 Sun.	9947·8726	73·7855	224·9042		4108
22 Mar. (81)	0 Sat.	11	43	3	21 Feb. (52)	6 Fri.	162·2275	957·3273	196·8189		4109
21 Mar. (81)	1 Sun.	17	55	12	11 Mar. (71)	5 Thur.	196·9097	893·3146	248·1293		4110
22 Mar. (81)	3 Tues.	0	7	21	28 Feb. (59)	2 Mon.	72·6326	740·5588	217·3061		4111
22 Mar. (81)	4 Wed.	6	19	30	19 Mar. (78)	1 Sun.	107·3140	676·5522	268·6164		4112
22 Mar. (81)	5 Thur.	12	31	39	8 Mar. (67)	5 Thur.	9983·0379	523·7962	237·7933		4113
21 Mar. (81)	6 Fri.	18	43	48	25 Feb. (56)	2 Mon.	9858·7607	371·0403	206·9701		4114
22 Mar. (81)	1 Sun.	0	55	57	15 Mar. (74)	1 Sun.	9893·4431	307·0338	258·2805		4115
22 Mar. (81)	2 Mon.	7	8	6	4 Mar. (63)	5 Thur.	9769·1660	154·2779	227·4572		4116
22 Mar. (81)	3 Tues.	13	20	15	22 Feb. (53)	3 Tues.	9983·5207	37·8125	199·3718		4117
21 Mar. (81)	4 Wed.	19	32	24	12 Mar. (72)	2 Mon.	18·2031	973·8070	250·6823		4118
22 Mar. (81)	6 Fri.	1	44	33	2 Mar (61)	0 Sat.	232·5580	857·3427	222·5968		4119
22 Mar. (81)	0 Sat.	7	56	42	21 Mar. (80)	6 Fri.	267·2404	793·3362	273·9072		4120
22 Mar. (81)	1 Sun.	14	8	51	10 Mar. (69)	3 Tues.	142·9632	640·5802	243·0840		4121
21 Mar. (81)	2 Mon.	20	21	0	27 Feb. (58)	0 Sat.	18·6860	487·8243	212·2609		4122

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3*a*	4	5	6	7	8
4123	944	1079	428	196-97	1021-22	55 Durmati	57 Rudhirōdgārin	...
4124	945	1080	429	197-98	1022-23	56 Dundubhi	58 Raktāksha	...
4125	946	1081	430	198-99	1023-24	57 Rudhirōdgārin	59 Krōdhana	3 Jyēshṭha
4126	947	1082	431	199-200	*1024-25	58 Raktāksha	60 Kshaya	...
4127	948	1083	432	200-01	1025-26	59 Krōdhana	1 Prabhava	7 Āśvina 10 *Pausha* (*ksh*)
4128	949	1084	433	201-02	1026-27	60 Kshaya	2 Vibhava	1 Chaitra
4129	950	1085	434	202-03	1027-28	1 Prabhava	3 Śukla	...
4130	951	1086	435	203-04	*1028-29	2 Vibhava	4 Pramōda	5 Śrāvaṇa
4131	952	1087	436	204-05	1029-30	3 Śukla	5 Prajāpati	...
4132	953	1088	437	205-06	1030-31	4 Pramōda	6 Aṅgiras	...
4133	954	1089	438	206-07	1031-32	5 Prajāpati	7 Śrīmukha	3 Jyēshṭha
4134	955	1090	439	207-08	*1032-33	6 Aṅgiras	8 Bhāva	...
4135	956	1091	440	208-09	1033-34	7 Śrīmukha	9 Yuvan	...
4136	957	1092	441	209-10	1034-35	8 Bhāva	10 Dhātṛi	2 Vaiśākha
4137	958	1093	442	210-11	1035-36	9 Yuvan	11 Īśvara	...
4138	959	1094	443	211-12	*1036-37	10 Dhātṛi	12 Bahudhānya	6 Bhādrapada
4139	960	1095	444	212-13	1037-38	11 Īśvara	13 Pramāthin	...
4140	961	1096	445	213-14	1038-39	12 Bahudhānya	14 Vikrama	...
4141	962	1097	446	214-15	1039-40	13 Pramāthin	15 Vṛisha	4 Āshāḍha
4142	963	1098	447	215-16	*1040-41	14 Vikrama	16 Chitrabhānu	...
4143	964	1099	448	216-17	1041-42	15 Vṛisha	17 Subhānu	...
4144	965	1100	449	217-18	1042-43	16 Chitrabhānu	18 Tāraṇa	3 Jyēshṭha
4145	966	1101	450	218-19	1043-44	17 Subhānu	19 Pārthiva	...
4146	967	1102	451	219-20	*1044-45	18 Tāraṇa	20 Vyaya	7 Āśvina
4147	968	1103	452	220-21	1045-46	19 Pārthiva	21 Sarvajit	...

XXXII—*Contd.*

COMMENCEMENT OF THE											
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						Kali.
Day and month A. D.	Week-day.	Time of true Mēsha-saṁkrānti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
22 Mar. (81)	4 Wed.	2	33	9	17 Mar. (76)	6 Fri.	53·3685	423·8178	263·3090		4123
22 Mar. (81)	5 Thur.	8	45	18	6 Mar. (65)	3 Tues.	9929·0902	271·0618	232·7480		4124
22 Mar. (81)	6 Fri.	14	57	27	23 Feb. (54)	0 Sat.	9804·8141	118·3068	201·9238		4125
21 Mar. (81)	0 Sat.	21	9	36	13 Mar. (73)	6 Fri.	9839·4965	54·2993	253·2353		4126
22 Mar. (81)	2 Mon.	3	21	45	3 Mar. (62)	4 Wed.	53·8514	937·8350	225·0498		4127
22 Mar. (81)	3 Tues.	9	33	54	21 Feb. (52)	2 Mon.	268·2062	821·3708	197·0643		4128
22 Mar. (81)	4 Wed.	15	46	3	12 Mar. (71)	1 Sun.	302·8885	757·3642	248·3748		4129
21 Mar. (81)	5 Thur.	21	58	12	29 Feb. (60)	5 Thur.	178·6114	604·6082	217·5517		4130
22 Mar. (81)	0 Sat.	4	10	21	19 Mar. (78)	4 Wed.	213·2937	540·6018	268·8620		4131
22 Mar. (81)	1 Sun.	10	22	30	8 Mar. (67)	1 Sun.	89·0166	387·8457	238·0388		4132
22 Mar. (81)	2 Mon.	16	34	39	25 Feb. (56)	5 Thur.	9964·7395	235·0898	207·2156		4133
21 Mar. (81)	3 Tues.	22	46	48	15 Mar. (75)	4 Wed.	9999·4219	171·0833	258·5271		4134
22 Mar. (81)	5 Thur.	4	58	57	4 Mar. (63)	1 Sun.	9875·1447	17·3274	227·7028		4135
22 Mar. (81)	6 Fri.	11	11	6	22 Feb. (53)	6 Fri.	89·4995	901·8631	199·6173		4136
22 Mar. (81)	0 Sat.	17	23	5	13 Mar. (72)	5 Thur.	124·1819	837·8565	250·4278		4137
21 Mar. (81)	1 Sun.	23	35	24	1 Mar. (61)	2 Mon.	9999·9048	685·1006	219·6046		4138
22 Mar. (81)	3 Tues.	5	47	33	20 Mar. (79)	1 Sun.	34·5871	621·0940	271·4150		4139
22 Mar. (81)	4 Wed.	11	59	42	9 Mar. (68)	5 Thur.	9910·3100	468·3381	239·5919		4140
22 Mar. (81)	5 Thur.	18	11	50	26 Feb. (57)	2 Mon.	9786·0329	315·5822	209·7686		4141
22 Mar. (82)	0 Sat.	0	23	59	16 Mar. (76)	1 Sun.	9820·7152	251·5756	261·0791		4142
22 Mar. (81)	1 Sun.	6	36	8	6 Mar. (65)	6 Fri.	35·0700	145·1113	232·9936		4143
22 Mar. (81)	2 Mon.	12	48	17	23 Feb. (54)	3 Tues.	9910·7929	982·3553	202·1704		4144
22 Mar. (81)	3 Tues.	19	0	26	14 Mar. (73)	2 Mon.	9945·4753	918·3478	253·4808		4145
22 Mar. (82)	5 Thur.	1	12	35	3 Mar. (63)	0 Sat.	159·8301	801·8845	225·3953		4146
22 Mar. (81)	6 Fri.	7	24	44	**22 Mar. (81)**	6 Fri.	194·5125	737·8780	276·7058		4147

TABLE

CONCURRENT YEAR								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
Kali.	Śaka.	Chaitrādi Vikrama.	Mêshādi solar year in Bengal.	Kollam.	A. D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3a	4	5	6	7	8
4148	969	1104	453	221-22	1046-47	20 Vyaya . .	22 Sarvadhārin .	...
4149	970	1105	454	222-23	1047-48	21 Sarvajit .	23 Virôdhin .	5 Śrāvaṇa .
4150	971	1106	455	223-24	*1048-49	22 Sarvadhārin .	24 Vikṛita . .	...
4151	972	1107	456	224-25	1049-50	23 Virôdhin .	25 Khara . .	...
4152	973	1108	457	225-26	1050-51	24 Vikṛita . .	26 Nandana .	3 Jyêshṭha .
4153	974	1109	458	226-27	1051-52	25 Khara . .	27 Vijaya . .	...
4154	975	1110	459	227-28	*1052-53	26 Nandana .	28 Jaya . .	...
4155	976	1111	460	228-29	1053-54	27 Vijaya . .	29 Manmatha .	2 Vaiśākha .
4156	977	1112	461	229-30	1054-55	28 Jaya . .	30 Durmukha .	...
4157	978	1113	462	230-31	1055-56	29 Manmatha .	31 Hêmalamba .	6 Bhādrapada
4158	979	1114	463	231-32	*1056-57	30 Durmukha .	32 Vilamba .	...
4159	980	1115	464	232-33	1057-58	31 Hêmalamba .	33 Vikārin .	...
4160	981	1116	465	233-34	1058-59	32 Vilamba .	34 Śārvarin .	4 Āshāḍha .
4161	982	1117	466	234-35	1059-60	33 Vikārin .	35 Plava . .	...
4162	983	1118	467	235-36	*1060-61	34 Śārvarin .	36 Śubhakṛit .	...
4163	984	1119	468	236-37	1061-62	35 Plava . .	37 Śôbhana .	3 Jyêshṭha .
4164	985	1120	469	237-38	1062-63	36 Śubhakṛit .	38 Krôdhin .	...
4165	986	1121	470	238-39	1063-64	37 Śôbhana .	39 Viśvāvasu .	7 Āśvina
4166	987	1122	471	239-40	*1064-65	38 Krodhin .	40 Parābhava .	...
4167	988	1123	472	240-41	1065-66	39 Viśvāvasu .	41 Plavaṅga .	...
4168	989	1124	473	241-42	1066-67	40 Parābhava .	42 Kīlaka . .	5 Śrāvaṇa
4169	990	1125	474	242-43	1067-68	41 Plavaṅga .	43 Saumya .	...
4170	991	1126	475	243-44	*1068-69	42 Kīlaka . .	44 Sādhāraṇa .	...
4171	992	1127	476	244-45	1069-70	43 Saumya .	45 Virôdhakṛit .	3 Jyêshṭha .
4172	993	1128	477	245-46	1070-71	44 Sādhāraṇa .	46 Paridhāvin .	...

XXXII—*Contd.*

COMMENCEMENT OF THE								Kali.
Solar year.			Luni-solar year (mean sunrise of civil day on which Chaitra śukla 1 ends).					
Day and month A. D.	Week-day.	Time of true Mêsha-saṁkrânti.	Day and month, A. D.	Week-day.	*a*	*b*	*c*	
13	14	17	19	20	23	24	25	1
		H. M. S.						
22 Mar. (81)	0 Sat. .	13 36 53	11 Mar. (70)	3 Tues. .	70·2354	585·1221	245·8826	4148
22 Mar. (81)	1 Sun. .	19 49 2	28 Feb. (59)	0 Sat. .	9945·9581	432·3661	215·0594	4149
22 Mar. (82)	3 Tues. .	2 1 11	18 Mar. (78)	6 Fri. .	9980·6406	368·3596	266·3697	4150
22 Mar. (81)	4 Wed. .	8 13 20	7 Mar. (66)	3 Tues. .	9856·3634	215·6036	235·5466	4151
22 Mar. (81)	5 Thur. .	14 25 29	25 Feb. (56)	1 Sun. .	70·7183	99·1393	207·7536	4152
22 Mar. (81)	6 Fri. .	20 37 38	16 Mar. (75)	0 Sat. .	105·4006	35·1328	258·7716	4153
22 Mar. (82)	1 Sun. .	2 49 47	4 Mar. (64)	4 Wed. .	9981·1235	882·3769	227·9483	4154
22 Mar. (81)	2 Mon. .	9 1 56	22 Feb. (53)	2 Mon. .	195·4783	767·9126	199·8629	4155
22 Mar. (81)	3 Tues. .	15 14 5	13 Mar. (72)	1 Sun. .	230·1606	701·9061	251·1734	4156
22 Mar. (81)	4 Wed. .	21 26 14	2 Mar. (61)	5 Thur. .	105·8835	549·1501	220·3501	4157
22 Mar. (82)	6 Fri. .	3 38 23	20 Mar. (80)	4 Wed. .	140·5659	485·1435	271·6605	4158
22 Mar. (81)	0 Sat. .	9 50 32	9 Mar. (68)	1 Sun. .	16·2888	333·3876	240·8375	4159
22 Mar. (81)	1 Sun. .	16 2 41	26 Feb. (57)	5 Thur. .	9892·0116	179·6317	210·0142	4160
22 Mar. (81)	2 Mon. .	22 14 50	17 Mar. (76)	4 Wed. .	9926·6940	115·6452	261·3246	4161
22 Mar. (82)	4 Wed. .	4 26 59	6 Mar. (66)	2 Mon. .	141·0488	999·1608	233·2391	4162
22 Mar. (81)	5 Thur. .	10 39 8	23 Feb. (54)	6 Fri. .	16·7716	856·4049	202·4159	4163
22 Mar. (81)	6 Fri. .	16 51 17	14 Mar. (73)	5 Thur. .	51·4540	782·3983	253·7264	4164
22 Mar. (81)	0 Sat. .	23 3 26	4 Mar. (63)	3 Tues. .	265·8089	665·9341	225·6409	4165
22 Mar. (82)	2 Mon. .	5 15 35	21 Mar. (81)	1 Sun. .	9961·8593	565·6363	274·2135	4166
22 Mar. (81)	3 Tues. .	11 27 44	10 Mar. (69)	5 Thur. .	9837·5821	412·8799	243·3903	4167
22 Mar. (81)	4 Wed. .	17 39 53	28 Feb. (59)	3 Tues. .	51·9369	296·4157	215·3050	4168
22 Mar. (81)	5 Thur. .	23 52 2	18 Mar. (77)	1 Sun. .	9747·9874	196·1174	263·3775	4169
22 Mar. (82)	0 Sat. .	6 4 11	7 Mar. (67)	6 Fri. .	9962·3421	79·6532	235·7921	4170
22 Mar. (81)	1 Sun. .	12 16 20	25 Feb. (56)	4 Wed. .	176·6970	963·1888	207·7067	4171
22 Mar. (81)	2 Mon. .	18 28 29	16 Mar. (75)	3 Tues. .	211·3794	899·1823	259·0172	4172

TABLE

Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
1	2	3	3a	4	5	6	7	8
4173	994	1129	478	246-47	1071-72	45 Virōdhakṛit	47 Pramādin	8 Kārttika 9 *Mārgaś: (ksh)*
4174	995	1130	479	247-48	*1072-73	46 Paridhāvin	48 Ānanda	2 Vaiśākha
4175	996	1131	480	248-49	1073-74	47 Pramādin	49 Rākshasa	...
4176	997	1132	481	249-50	1074-75	48 Ānanda	50 Anala†	6 Bhādrapada
4177	998	1133	482	250-51	1075-76	49 Rākshasa	52 *Kālayukta*	...
4178	999	1134	483	251-52	*1076-77	50 Anala	53 *Siddhārthin*	...
4179	1000	1135	484	252-53	1077-78	51 Piṅgala	54 *Raudra*	4 Āshāḍha
4180	1001	1136	485	253-54	1078-79	52 Kālayukta	55 *Durmati*	...
4181	1002	1137	486	254-55	1079-80	53 Siddhārthin	56 *Dundubhi*	...
4182	1003	1138	487	255-56	*1080-81	54 Raudra	57 Rudhirōdgārin	3 Jyēshṭha
4183	1004	1139	488	256-57	1081-82	55 Durmati	58 Raktāksha	...
4184	1005	1140	489	257-58	1082-83	56 Dundubhi	59 Krōdhana	7 Āśvina
4185	1006	1141	490	258-59	1083-84	57 Rudhirōdgārin	60 Kshaya	...
4186	1007	1142	491	259-60	*1084-85	58 Raktāksha	1 Prabhava	...
4187	1008	1143	492	260-61	1085-86	59 Krōdhana	2 Vibhava	5 Śrāvaṇa
4188	1009	1144	493	261-62	1086-87	60 Kshaya	3 Śukla	...
4189	1010	1145	494	262-63	1087-88	1 Prabhava	4 Pramōda	...
4190	1011	1146	495	263-64	*1088-89	2 Vibhava	5 Prajāpati	3 Jyēshṭha
4191	1012	1147	496	264-65	1089-90	3 Śukla	6 Aṅgiras	...
4192	1013	1148	497	265-66	1090-91	4 Pramōda	7 Śrīmukha	8 Kārttika 10 *Pausha (ksh)*
4193	1014	1149	498	266-67	1091-92	5 Prajāpati	8 Bhāva	1 Chaitra
4194	1015	1150	499	267-68	*1092-93	6 Aṅgiras	9 Yuvan	...
4195	1016	1151	500	268-69	1093-94	7 Śrīmukha	10 Dhātṛi	6 Bhādrapada
4196	1017	1152	501	269-70	1094-95	8 Bhāva	11 Īśvara	...
4197	1018	1153	502	270-71	1095-96	9 Yuvan	12 Bahudhānya	...

Column group heading: CONCURRENT YEAR. (columns 1–5)

† 51 Piṅgala was suppressed in the north.

LXXXII—*Contd.*

COMMENCEMENT OF THE									
SOLAR YEAR.			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						Kali.
Day and month A. D.	Week-day.	Time of true Mêsha-saṁkrānti.	Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17	19	20	23	24	25		1
		H. M. S.							
23 Mar. (82)	4 Wed.	0 40 38	5 Mar. (64)	0 Sat.	87·1023	746·4264	228·1939		4173
22 Mar. (82)	5 Thur.	6 52 47	22 Feb. (53)	4 Wed.	9962·8251	593·6705	197·3706		4174
22 Mar. (81)	6 Fri.	13 4 56	12 Mar. (71)	3 Tues.	9997·5074	530·6639	248·6811		4175
22 Mar. (81)	0 Sat.	19 17 5	1 Mar. (60)	0 Sat.	9873·2303	376·9079	217·8580		4176
23 Mar. (82)	2 Mon.	1 29 14	20 Mar. (79)	6 Fri.	9907·9126	312·9015	269·1683		4177
22 Mar. (82)	3 Tues.	7 41 23	8 Mar. (68)	3 Tues.	9783·6356	160·1454	238·3451		4178
22 Mar. (81)	4 Wed.	13 53 32	26 Feb. (57)	1 Sun.	9997·9904	43·6812	210·2597		4179
22 Mar. (81)	5 Thur.	20 5 41	17 Mar. (76)	0 Sat.	32·6728	979·6747	261·5708		4180
23 Mar. (82)	0 Sat.	2 17 50	7 Mar. (66)	5 Thur.	247·0275	863·2103	233·4847		4181
22 Mar. (82)	1 Sun.	8 29 59	24 Feb. (55)	2 Mon.	122·7504	710·4544	202·6614		4182
22 Mar. (81)	2 Mon.	14 42 8	14 Mar. (73)	1 Sun.	157·4328	646·4478	253·9719		4183
22 Mar. (81)	3 Tues.	20 54 17	3 Mar. (62)	5 Thur.	33·1557	493·6919	223·1487		4184
23 Mar. (82)	5 Thur.	3 6 26	22 Mar. (81)	4 Wed.	67·8380	429·6854	274·4591		4185
22 Mar. (82)	6 Fri.	9 18 35	10 Mar. (70)	1 Sun.	9943·5609	276·9294	245·6358		4186
22 Mar. (81)	0 Sat.	15 30 43	27 Feb. (58)	5 Thur.	9819·2837	124·1735	212·8127		4187
22 Mar. (81)	1 Sun.	21 42 52	18 Mar. (77)	4 Wed.	9853·9661	60·1669	264·1231		4188
23 Mar. (82)	3 Tues.	3 55 1	8 Mar. (67)	2 Mon.	68·3209	943·8027	236·0377		4189
22 Mar. (82)	4 Wed.	10 7 10	26 Feb. (57)	0 Sat.	282·6758	827·2383	207·9522		4190
22 Mar. (81)	5 Thur.	16 19 19	16 Mar. (75)	6 Fri.	317·3582	763·2318	259·2627		4191
22 Mar. (81)	6 Fri.	22 31 28	5 Mar. (64)	3 Tues.	193·0810	610·4759	228·4395		4192
23 Mar. (82)	1 Sun.	4 43 37	22 Feb. (53)	0 Sat.	68·8039	457·7200	197·6162		4193
22 Mar. (82)	2 Mon.	10 55 46	12 Mar. (72)	6 Fri.	103·4862	393·7134	248·9266		4194
22 Mar. (81)	3 Tues.	17 7 55	1 Mar. (60)	3 Tues.	9979·2090	240·9577	218·1035		4195
22 Mar. (81)	4 Wed.	23 20 4	20 Mar. (79)	2 Mon.	13·8914	176·9509	269·4139		4196
23 Mar. (82)	6 Fri.	5 32 13	9 Mar. (68)	6 Fri.	9889·6148	24·1949	238·5907		4197

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3*a*	4	5	6	7	8
4198	1019	1154	503	271-72	*1096-97	10 Dhātṛi . .	13 Pramāthin .	4 Āshāḍha .
4199	1020	1155	504	272-73	1097-98	11 Īśvara . .	14 Vikrama .	...
4200	1021	1156	505	273-74	1098-99	12 Bahudhānya .	15 Vṛisha . .	...
4201	1022	1157	506	274-75	1099-1100	13 Pramāthin .	16 Chitrabhānu .	3 Jyēshṭha .
4202	1023	1158	507	275-76	*1100-01	14 Vikrama .	17 Subhānu .	...
4203	1024	1159	508	276-77	1101-02	15 Vṛisha . .	18 Tāraṇa . .	7 Āśvina .
4204	1025	1160	509	277-78	1102-03	16 Chitrabhānu .	19 Pārthiva .	...
4205	1026	1161	510	278-79	1103-04	17 Subhānu .	20 Vyaya . .	...
4206	1027	1162	511	279-80	*1104-05	18 Tāraṇa . .	21 Sarvajit .	4 Āshāḍha .
4207	1028	1163	512	280-81	1105-06	19 Pārthiva .	22 Sarvadhārin .	...
4208	1029	1164	513	281-82	1106-07	20 Vyaya . .	23 Virōdhin .	...
4209	1030	1165	514	282-83	1107-08	21 Sarvajit .	24 Vikṛita . .	3 Jyēshṭha .
4210	1031	1166	515	283-84	*1108-09	22 Sarvadhārin .	25 Khara . .	...
4211	1032	1167	516	284-85	1109-10	23 Virōdhin .	26 Nandana .	{ 8 Kārttika 10 *Pausha* (*ksh*) 12 Phālguna }
4212	1033	1168	517	285-86	1110-11	24 Vikṛita . .	27 Vijaya . .	...
4213	1034	1169	518	286-87	1111-12	25 Khara . .	28 Jaya . .	...
4214	1035	1170	519	287-88	*1112-13	26 Nandana .	29 Manmatha .	5 Śrāvaṇa .
4215	1036	1171	520	288-89	1113-14	27 Vijaya . .	30 Durmukha .	...
4216	1037	1172	521	289-90	1114-15	28 Jaya . .	31 Hēmalamba .	...
4217	1038	1173	522	290-91	1115-16	29 Manmatha .	32 Vilamba .	4 Āshāḍha .
4218	1039	1174	523	291-92	*1116-17	30 Durmukha .	33 Vikārin .	...
4219	1040	1175	524	292-93	1117-18	31 Hēmalamba .	34 Śārvarin .	...
4220	1041	1176	525	293-94	1118-19	32 Vilamba .	35 Plava . .	2 Vaiśākha .
4221	1042	1177	526	294-95	1119-20	33 Vikārin .	36 Śubhakṛit .	...
4222	1043	1178	527	295-96	*1120-21	34 Śārvarin .	37 Śōbhana .	6 Bhādrapada

LXXXII.—*Contd.*

COMMENCEMENT OF THE											Kali.
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						
Day and month A. D.	Week-day.	Time of true Mêsha-saṁkrânti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
22 Mar. (82)	0 Sat.	11	44	22	27 Feb. (58)	4 Wed.	103·9691	907·7307	210·5052		4198
22 Mar. (81)	1 Sun.	17	56	31	17 Mar. (76)	3 Tues.	138·6515	843·7242	261·8157		4199
23 Mar. (82)	3 Tues.	0	8	40	6 Mar. (65)	0 Sat.	14·3744	690·9683	230·9925		4200
23 Mar. (82)	4 Wed.	6	20	49	24 Feb. (55)	5 Thur.	228·7291	574·5038	202·8848		4201
22 Mar. (82)	5 Thur.	12	32	58	13 Mar. (73)	3 Tues.	9924·7795	474·2057	251·4575		4202
22 Mar. (81)	6 Fri.	18	45	7	2 Mar. (61)	0 Sat.	9800·5024	321·4497	20·6342		4203
23 Mar. (82)	1 Sun.	0	57	16	21 Mar. (80)	6 Fri.	9835·1847	257·4432	271·9446		4204
23 Mar. (82)	2 Mon.	7	9	25	11 Mar. (70)	4 Wed.	49·5396	140·9788	243·8592		4205
22 Mar. (82)	3 Tues.	13	21	34	28 Feb. (59)	1 Sun.	9925·2624	988·2229	213·0361		4206
22 Mar. (81)	4 Wed.	19	33	43	18 Mar. (77)	0 Sat.	9959·9448	924·2154	264·3464		4207
23 Mar. (82)	6 Fri.	1	45	52	8 Mar. (67)	5 Thur.	174·2996	807·7521	236·2610		4208
23 Mar. (82)	0 Sat.	7	58	1	25 Feb. (56)	2 Mon.	50·0225	654·9962	205·4387		4209
22 Mar. (82)	1 Sun.	14	10	10	15 Mar. (75)	1 Sun.	84·7048	590·9896	256·7483		4210
22 Mar. (81)	2 Mon.	20	22	19	4 Mar. (63)	5 Thur.	9960·4277	438·2337	225·9250		4211
23 Mar. (82)	4 Wed.	2	34	28	23 Mar. (82)	4 Wed.	9995·1101	374·2271	277·2354		4212
23 Mar. (82)	5 Thur.	8	46	37	12 Mar. (71)	1 Sun.	9870·8330	221·4712	246·4122		4213
22 Mar. (82)	6 Fri.	14	58	46	1 Mar. (61)	6 Fri.	85·1877	105·0069	218·3269		4214
22 Mar. (81)	0 Sat.	21	10	55	20 Mar. (79)	5 Thur.	119·8701	41·0004	269·6373		4215
23 Mar. (82)	2 Mon.	3	23	4	9 Mar. (68)	2 Mon.	9995·5930	888·3444	238·8140		4216
23 Mar. (82)	3 Tues.	9	35	13	27 Feb. (58)	0 Sat.	209·9478	771·7891	210·7286		4217
22 Mar. (82)	4 Wed.	15	47	22	17 Mar. (77)	6 Fri.	244·6302	707·7736	262·0391		4218
22 Mar. (81)	5 Thur.	21	59	31	6 Mar. (65)	3 Tues.	120·3530	555·0176	231·2158		4219
23 Mar. (82)	0 Sat.	4	11	40	23 Feb. (54)	0 Sat.	9996·0759	402·2617	200·3925		4220
23 Mar. (82)	1 Sun.	10	23	49	14 Mar. (73)	6 Fri.	30·7582	338·2552	251·7030		4221
22 Mar. (82)	2 Mon.	16	35	58	2 Mar. (62)	3 Tues.	9906·4811	185·4993	220·8798		4222

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8
4223	1044	1179	528	296-97	1121-22	35 Plava . .	38 Krôdhin .	...
4224	1045	1180	529	297-98	1122-23	36 Śubhakṛit .	39 Viśvâvasu .	...
4225	1046	1181	530	298-99	1123-24	37 Śôbhana .	40 Parâbhava .	4 Āshâḍha .
4226	1047	1182	531	299-300	*1124-25	38 Krôdhin .	41 Plavaṅga .	...
4227	1048	1183	532	300-01	1125-26	39 Viśvâvasu .	42 Kîlaka . .	...
4228	1049	1184	533	301-02	11 6-27	40 Parâbhava .	43 Saumya .	3 Jyêshṭha .
4229	1050	1185	534	302-03	1127-28	41 Plavaṅga .	44 Sâdhâraṇa .	...
4230	1051	1186	535	303-04	*1128-29	42 Kîlaka . .	45 Virôdhakṛit .	12 Phâlguna† .
4231	1052	1187	536	304-05	1129-30	43 Saumya .	46 Paridhâvin .	...
4232	1053	1188	537	305-06	1130-31	44 Sâdhâraṇa .	47 Pramâdin .	...
4233	1054	1189	538	306-07	1131-32	45 Virôdhakṛit .	48 Ānanda . .	5 Śrâvaṇa .
4234	1055	1190	539	307-08	*1132-33	46 Paridhâvin .	49 Râkshasa .	...
4235	1056	1191	540	308-09	1133-34	47 Pramâdin .	50 Anala . .	...
4236	1057	1192	541	309-10	1134-35	48 Ānanda .	51 Piṅgala .	4 Āshâḍha .
4237	1058	1193	542	310-11	1135-36	49 Râkshasa .	52 Kâlayukta .	...
4238	1059	1194	543	311-12	*1136-37	50 Anala . .	53 Siddhârthin .	...
4239	1060	1195	544	312-13	1137-38	51 Piṅgala .	54 Raudra . .	2 Vaiśâkha .
4240	1061	1196	545	313-14	1138-39	52 Kâlayukta .	55 Durmati . .	...
4241	1062	1197	546	314-15	1139-40	53 Siddhârthin .	56 Dundubhi . .	6 Bhâdrapada
4242	1063	1198	547	315-16	*1140-41	54 Raudra .	57 Rudhirôdgârin	...
4243	1064	1199	548	316-17	1141-42	55 Durmati .	58 Raktâksha .	...
4244	1065	1200	549	317-18	1142-43	56 Dundubhi .	59 Krôdhana .	4 Āshâḍha .
4245	1066	1201	550	318-19	1143-44	57 Rudhirôdgârin	60 Kshaya . .	...
4246	1067	1202	551	319-20	*1144-45	58 Raktâksha .	1 Prabhava . .	...
4247	1068	1203	552	320-21	1145-46	59 Krôdhana .	2 Vibhava . .	3 Jyêshṭha .

† See "Remarks" on page preceding the Table.

LXXXII—*Contd.*

COMMENCEMENT OF THE									Kali.
SOLAR YEAR.			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						
Day and month A. D.	Week-day.	Time of true Mēsha-saṁkrānti.	Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17	19	20	23	24	25	1	
		H. M. S.							
22 Mar. (81)	3 Tues.	22 48 7	21 Mar. (80)	2 Mon.	9941·1635	121·4928	272·1902	4223	
23 Mar. (82)	5 Thur.	5 0 16	11 Mar. (70)	0 Sat.	155·5183	5·0284	244·1047	4224	
23 Mar. (82)	6 Fri.	11 12 25	28 Feb. (59)	4 Wed.	31·2411	852·2724	213·2826	4225	
22 Mar. (82)	0 Sat.	17 24 34	18 Mar. (78)	3 Tues.	65·9236	788·2659	264·5920	4226	
22 Mar. (81)	1 Sun.	23 36 43	8 Mar. (67)	1 Sun.	280·2784	671·8016	236·5066	4227	
23 Mar. (82)	3 Tues.	5 48 52	25 Feb. (56)	5 Thur.	156·0012	519·0457	205·6833	4228	
23 Mar. (82)	4 Wed.	12 1 1	15 Mar. (74)	3 Tues.	9852·0516	418·7475	254·2560	4229	
22 Mar. (82)	5 Thur.	18 13 10	3 Mar. (63)	0 Sat.	9727·7745	265·9915	223·4328	4230	
23 Mar. (82)	0 Sat.	0 25 19	22 Mar. (81)	6 Fri.	9762·4568	201·9851	274·7432	4231	
23 Mar. (82)	1 Sun.	6 37 27	12 Mar. (71)	4 Wed.	9976·8117	85·5207	246·6577	4232	
23 Mar. (82)	2 Mon.	12 49 36	2 Mar. (61)	2 Mon.	191·1665	969·0564	218·5724	4233	
22 Mar. (82)	3 Tues.	19 1 45	20 Mar. (80)	1 Sun.	225·8489	905·0499	269·8828	4234	
23 Mar. (82)	5 Thur.	1 13 54	9 Mar. (68)	5 Thur.	101·5717	752·2939	239·0596	4235	
23 Mar. (82)	6 Fri.	7 26 3	26 Feb. (57)	2 Mon.	9977·2946	599·5380	208·2363	4236	
23 Mar. (82)	0 Sat.	13 38 12	17 Mar. (76)	1 Sun.	11·9770	535·5314	259·5468	4237	
22 Mar. (82)	1 Sun.	19 50 21	5 Mar. (65)	5 Thur.	9887·6999	382·7755	228·7236	4238	
23 Mar. (82)	3 Tues.	2 2 30	22 Feb. (53)	2 Mon.	9763·4226	230·1095	197·9004	4239	
23 Mar. (82)	4 Wed.	8 14 39	13 Mar. (72)	1 Sun.	9798·1050	166·0130	249·2108	4240	
23 Mar. (82)	5 Thur.	14 26 48	3 Mar. (62)	6 Fri.	12·4599	49·5488	221·1253	4241	
22 Mar. (82)	6 Fri.	20 38 57	21 Mar. (81)	5 Thur.	47·1422	985·5422	272·4358	4242	
23 Mar. (82)	1 Sun.	2 51 6	11 Mar. (70)	3 Tues.	261·4971	869·0779	244·3503	4243	
23 Mar. (82)	2 Mon.	9 3 15	28 Feb. (59)	0 Sat.	137·2199	716·3219	214·5272	4244	
23 Mar. (82)	3 Tues.	15 15 24	19 Mar. (78)	6 Fri.	171·9024	652·3154	204·8375	5245	
22 Mar. (82)	4 Wed.	21 27 33	7 Mar. (67)	3 Tues.	47·6751	499·5595	234·0143	4246	
23 Mar. (82)	6 Fri.	3 39 42	24 Feb. (55)	0 Sat.	9923·3480	346·3035	203·1911	4247	

TABLE

CONCURRENT YEAR.								Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3a	4	5	6	7	8
4248	1069	1204	553	321-22	1146-47	60 Kshaya .	3 Śukla . .	...
4249	1070	1205	554	322-23	1147-48	1 Prabhava .	4 Pramōda	{ 8 Kārttika 9 *Mārgaś.* (*ksh*) 12 Phālguna }
4250	1071	1206	555	323-24	*1148-49	2 Vibhava .	5 Prajāpati .	...
4251	1072	1207	556	324-25	1149-50	3 Śukla . .	6 Aṅgiras .	...
4252	1073	1208	557	325-26	1150-51	4 Pramōda .	7 Śrīmukha .	5 Śrāvaṇa .
4253	1074	1209	558	326-27	1151-52	5 Prajāpati .	8 Bhāva . .	...
4254	1075	1210	559	327-28	*1152-53	6 Aṅgiras .	9 Yuvan . .	...
4255	1076	1211	560	328-29	1153-54	7 Śrīmukha .	10 Dhātṛi . .	4 Āshāḍha .
4256	1077	1212	561	329-30	1154-55	8 Bhāva . .	11 Iśvara . .	...
4257	1078	1213	562	330-31	1155-56	9 Yuvan . .	12 Bahudhānya .	...
4258	1079	1214	563	331-32	*1156-57	10 Dhātṛi . .	13 Pramāthin .	2 Vaiśākha .
4259	1080	1215	564	332-33	1157-58	11 Iśvara . .	14 Vikrama .	...
4260	1081	1216	565	333-34	1158-59	12 Bahudhānya .	15 Vṛisha . .	6 Bhādrapada
4261	1082	1217	566	334-35	1159-60	13 Pramāthin .	16 Chitrabhānu†	...
4262	1083	1218	567	335-36	*1160-61	14 Vikrama .	18 *Tāraṇa* . .	...
4263	1084	1219	568	336-37	1161-62	15 Vṛisha . .	19 *Pārthiva* .	4 Āshāḍha .
4264	1085	1220	569	337-38	1162-63	16 Chitrabhānu .	20 *Vyaya* . .	...
4265	1086	1221	570	338-39	1163-64	17 Subhānu .	21 *Sarvajit* .	...
4266	1087	1222	571	339-40	*1164-65	18 Tāraṇa . .	22 *Sarvadhārin* .	3 Jyēshṭha .
4267	1088	1223	572	340-41	1165-66	19 Pārthiva .	23 Virōdhin .	...
4268	1089	1224	573	341-42	1166-67	20 Vyaya . .	24 Vikṛita . .	{ 7 Āśvina 10 *Pausha* (*ksh*) 12 Phālguna }
4269	1090	1225	574	342-43	1167-68	21 Sarvajit .	25 Khara . .	...
4270	1091	1226	575	343-44	*1168-69	22 Sarvadhārin .	26 Nandana .	...
4271	1092	1227	576	344-45	1169-70	23 Virōdhin .	27 Vijaya . .	5 Śrāvaṇa .
4272	1093	1228	577	345-46	1170-71	24 Vikṛita . .	28 Jaya . .	...

† 17 Subhānu was suppressed in the north.

LXXXII—*Contd.*

COMMENCEMENT OF THE											
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).					Kali.
Day and month A. D.	Week-day.	Time of true Mêsha-saṁkrānti.			Day and month A. D.	Week-day.	*a*	*b*	*c*	
13	14	17			19	20	23	24	25	1
		H.	M.	S.						
23 Mar. (82)	0 Sat.	9	51	51	15 Mar. (74)	6 Fri.	9958·0304	282·7970	254·5016	4248
23 Mar. (82)	1 Sun.	16	4	0	4 Mar. (63)	3 Tues.	9833·7532	129·0410	223·6783	4249
22 Mar. (82)	2 Mon.	22	16	9	22 Mar. (82)	2 Mon.	9868·4356	66·0346	274·0887	4250
23 Mar. (82)	4 Wed.	4	28	18	12 Mar. (71)	0 Sat.	82·7905	949·5702	246·9033	4251
23 Mar. (82)	5 Thur.	10	40	27	2 Mar. (61)	5 Thur.	297·1453	833·1059	218·6180	4252
23 Mar. (82)	6 Fri.	16	52	36	21 Mar. (80)	4 Wed.	331·8276	769·0994	270·1283	4253
22 Mar. (82)	0 Sat.	23	4	45	9 Mar. (69)	1 Sun.	207·5505	616·3435	239·3051	4254
23 Mar. (82)	2 Mon.	5	16	54	26 Feb. (57)	5 Thur.	83·2734	463·5875	208·4819	4255
23 Mar. (82)	3 Tues.	11	29	3	16 Mar. (75)	3 Tues.	9779·3237	363·2894	257·0546	4256
23 Mar. (82)	4 Wed.	17	41	12	6 Mar. (65)	1 Sun.	9993·6786	246·8250	228·9691	4257
22 Mar. (82)	5 Thur.	23	53	21	23 Feb. (54)	5 Thur.	9869·4024	94·0691	198·1458	4258
23 Mar. (82)	0 Sat.	6	5	30	13 Mar. (72)	4 Wed.	9904·0838	30·0625	249·4563	4259
23 Mar. (82)	1 Sun.	12	17	39	3 Mar. (62)	2 Mon.	118·4386	913·5983	221·3709	4260
23 Mar. (82)	2 Mon.	18	29	48	22 Mar. (81)	1 Sun.	153·1210	849·5918	272·6813	4261
23 Mar. (83)	4 Wed.	0	41	57	10 Mar. (70)	5 Thur.	28·8439	696·8358	241·8581	4262
23 Mar. (82)	5 Thur.	6	54	6	27 Feb. (58)	2 Mon.	9904·5667	544·0799	211·0349	4263
23 Mar. (82)	6 Fri.	13	6	15	18 Mar. (77)	1 Sun.	9939·2491	480·0733	262·3454	4264
23 Mar. (82)	0 Sat.	19	18	24	7 Mar. (66)	5 Thur.	9814·9719	327·3173	231·5221	4265
23 Mar. (83)	2 Mon.	1	30	33	25 Feb. (56)	3 Tues.	29·3268	210·8530	203·4366	4266
23 Mar. (82)	3 Tues.	7	42	42	15 Mar. (74)	2 Mon.	64·0091	146·8465	255·7471	4267
23 Mar. (82)	4 Wed.	13	54	51	4 Mar. (63)	6 Fri.	9939·7320	994·0906	223·9239	4268
23 Mar. (82)	5 Thur.	20	7	0	23 Mar. (82)	5 Thur.	9974·4144	930·0840	275·2343	4269
23 Mar. (83)	0 Sat.	2	19	9	12 Mar. (72)	3 Tues.	188·7692	813·6108	247·1488	4270
23 Mar. (82)	1 Sun.	8	31	18	1 Mar. (60)	0 Sat.	64·4920	660·8638	216·3257	4271
23 Mar. (82)	2 Mon.	14	43	27	20 Mar. (79)	6 Fri.	99·1744	596·8573	267·6361	4272

TABLE

CONCURRENT YEAR.								
						JOVIAN SAṀVATSARA.		Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8
4273	1094	1229	578	346-47	1171-72	25 Khara . .	29 Manmatha .	...
4274	1095	1230	579	347-48	*1172-73	26 Nandana .	30 Durmukha .	4 Āshāḍha .
4275	1096	1231	580	348-49	1173-74	27 Vijaya . .	31 Hēmalamba .	...
4276	1097	1232	581	349-50	1174-75	28 Jaya . .	32 Vilamba .	...
4277	1098	1233	582	350-51	1175-76	29 Manmatha .	33 Vikārin .	2 Vaiśākha .
4278	1099	1234	583	351-52	*1176-77	30 Durmukha .	34 Śārvarin .	...
4279	1100	1235	584	352-53	1177-78	31 Hēmalamba .	35 Plava . .	6 Bhādrapada
4280	1101	1236	585	353-54	1178-79	32 Vilamba .	36 Śubhakṛit .	...
4281	1102	1237	586	354-55	1179-80	33 Vikārin .	37 Śōbhana .	...
4282	1103	1238	587	355-56	*1180-81	34 Śārvarin .	38 Krōdhin .	4 Āshāḍha .
4283	1104	1239	588	356-57	1181-82	35 Plava . .	39 Viśvāvasu .	...
4284	1105	1240	589	357-58	1182-83	36 Śubhakṛit .	40 Parābhava .	...
4285	1106	1241	590	358-59	1183-84	37 Śōbhana .	41 Plavaṅga .	2 Vaiśākha .
4286	1107	1242	591	359-60	*1184-85	38 Krōdhin .	42 Kīlaka . .	...
4287	1108	1243	592	360-61	1185-86	39 Viśvāvasu .	43 Saumya .	6 Bhādrapada
4288	1109	1244	593	361-62	1186-87	40 Parābhava .	44 Sādhāraṇa .	...
4289	1110	1245	594	362-63	1187-88	41 Plavaṅga .	45 Virōdhakṛit .	...
4290	1111	1246	595	363-64	*1188-89	42 Kīlaka . .	46 Paridhāvin .	5 Śrāvaṇa .
4291	1112	1247	596	364-65	1189-90	33 Saumya .	47 Pramādin .	...
4292	1113	1248	597	365-66	1190-91	44 Sādhāraṇa .	48 Ānanda .	...
4293	1114	1249	598	366-67	1191-92	45 Virōdhakṛit .	49 Rākshasa .	3 Jyēshṭha .
4294	1115	1250	599	367-68	*1192-93	46 Paridhāvin .	50 Anala . .	...
4295	1116	1251	600	368-69	1193-94	47 Pramādin .	51 Piṅgala .	...
4296	1117	1252	601	369-70	1194-95	48 Ānanda .	52 Kālayukta .	2 Vaiśākha .
4297	1118	1253	602	370-71	1195-96	49 Rākshasa .	53 Siddhārthin .	...

LXXXII—*Contd.*

COMMENCEMENT OF THE											Kali.
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						
Day and month A. D.	Week-day.	Time of true Mêsha-saṁkrânti.			Day and month A. D.	Week-day.	*a*	*b*	*c*		
13	14	17			19	20	23	24	25		1
		H.	M.	S.							
23 Mar. (82)	3 Tues.	20	55	36	9 Mar. (68)	3 Tues.	9974·9973	444·1013	236·8129		4273
23 Mar. (83)	5 Thur.	3	7	45	26 Feb. (57)	0 Sat.	9850·6201	291·3454	205·9896		4274
23 Mar. (82)	6 Fri.	9	19	54	16 Mar. (75)	6 Fri.	9885·3025	227·3389	257·3001		4275
23 Mar. (82)	0 Sat.	15	32	3	6 Mar. (65)	4 Wed.	99·6574	110·8746	229·2147		4276
23 Mar. (82)	1 Sun.	21	44	11	23 Feb. (54)	1 Sun.	9975·3801	958·1187	198·1914		4277
23 Mar. (83)	3 Tues.	3	56	20	13 Mar. (73)	0 Sat.	10·0625	894·1120	249·7018		4278
23 Mar. (82)	4 Wed.	10	8	29	3 Mar. (62)	5 Thur.	224·4174	777·6478	221·6164		4279
23 Mar. (82)	5 Thur.	16	20	38	22 Mar. (81)	4 Wed.	259·0998	713·6413	272·9269		4280
23 Mar. (82)	6 Fri.	22	32	47	11 Mar. (70)	1 Sun.	134·8226	560·8853	242·1036		4281
23 Mar. (83)	1 Sun.	4	44	56	28 Feb. (59)	5 Thur.	10·5455	408·1294	211·2804		4282
23 Mar. (82)	2 Mon.	10	57	5	18 Mar. (77)	4 Wed.	45·2279	344·1228	262·5909		4283
23 Mar. (82)	3 Tues.	17	9	14	7 Mar. (66)	1 Sun.	9920·9507	191·3668	231·7677		4284
23 Mar. (82)	4 Wed.	23	21	23	24 Feb. (55)	5 Thur.	9796·6735	38·6109	200·9444		4285
23 Mar. (83)	6 Fri.	5	33	32	15 Mar. (75)	5 Thur.	169·9879	10·8960	254·9926		4286
23 Mar. (82)	0 Sat.	11	45	41	4 Mar. (63)	2 Mon.	45·7108	858·1401	224·1694		4287
23 Mar. (82)	1 Sun.	17	57	50	23 Mar. (82)	1 Sun	80·3931	794·1335	275·4799		4288
24 Mar. (83)	3 Tues.	0	9	59	13 Mar. (72)	6 Fri.	294·7480	677·6693	247·3944		4289
23 Mar. (83)	4 Wed.	6	22	8	1 Mar. (61)	3 Tues.	170·4708	524·9133	216·5712		4290
23 Mar. (82)	5 Thur.	12	34	17	19 Mar. (78)	1 Sun.	9866·5213	424·6151	265·1438		4291
23 Mar. (82)	6 Fri.	18	46	26	8 Mar. (67)	5 Thur.	9742·2440	271·8592	234·3207		4292
24 Mar. (83)	1 Sun.	0	58	35	26 Feb. (57)	3 Tues.	9956·5989	155·3949	206·2352		4293
23 Mar. (83)	2 Mon.	7	10	44	16 Mar. (76)	2 Mon.	9991·2813	91·3884	257·5456		4294
23 Mar. (82)	3 Tues.	13	22	53	6 Mar. (65)	0 Sat.	205·6361	974·9241	229·4602		4295
23 Mar. (82)	4 Wed.	19	35	2	23 Feb. (54)	4 Wed.	81·3589	822·1741	198·6370		4296
24 Mar. (83)	6 Fri.	1	47	11	14 Mar. (73)	3 Tues.	116·0413	758·1608	249·9474		4297

TABLE

CONCURRENT YEAR.						JOVIAN SAṀVATSARA.		Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A. D.	Southern system.	Northern system.	
1	2	3	3*a*	4	5	6	7	8
4298	1119	1254	603	371-72	*1196-97	50 Anala . .	54 Raudra .	6 Bhādrapada
4299	1120	1255	604	372-73	1197-98	51 Piṅgala .	55 Durmati .	...
4300	1121	1256	605	373-74	1198-99	52 Kālayukta .	56 Dundubhi .	...
4301	1122	1257	606	374-75	1199-1200	53 Siddhārthin .	57 Rudhirōdgārin	4 Āshāḍha .
4302	1123	1258	607	375-76	*1200-01	54 Raudra .	58 Raktāksha .	...

LXXXII—*Concld.*

COMMENCEMENT OF THE											
SOLAR YEAR.					LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).					Kali.
Day and month A. D.	Week-day.	Time of true Mēsha-saṁkrānti.			Day and month A. D.	Week-day.	*a*	*b*	*c*	
13	14	17			19	20	23	24	25	1
		H.	M.	S.						
23 Mar. (83)	0 Sat. .	7	59	20	2 Mar. (62)	0 Sat. .	9991·7641	605·4056	219·1242	4298
23 Mar. (82)	1 Sun. .	14	11	29	21 Mar. (80)	6 Fri. .	26·4465	541·3991	270·4346	4299
23 Mar. (82)	2 Mon.	20	23	38	10 Mar. (69)	3 Tues.	9902·1694	388·6432	239·6115	4300
24 Mar. (83)	4 Wed.	2	35	47	27 Feb. (58)	0 Sat. .	9777·8923	235·8872	208·7660	4301
23 Mar. (83)	5 Thur.	8	47	56	17 Mar. (77)	6 Fri. .	9812·5747	171·8807	260·0765	4302

TABLE LXXXIII A.

DURATION AND COLLECTIVE DURATION OF TRUE SOLAR MONTHS, WITH INCREASE OF *a*, *b*, *c* AT EACH TRUE SAṀKRĀNTI.

By the Brahma-Siddhânta.

Calculated for the year K. Y. 4500, (expired), A. D. 899—900.

a in 10,000 ths of circle; b and c in 1,000 ths; "saṁ" = solar saṁkrānti.

Luni-solar month (ending at the second of the two solar *saṁkrāntis* connected with it).	At true solar saṁkrānti.	Collective duration in days, hours, etc., and collective increase of *a*, *b*, *c* from true Mēsha-saṁkrānti to each true saṁkrānti.						At true solar saṁkrānti.	Length of solar month preceding each true saṁkrānti, and increase of *a*, *b*, *c* between each such saṁkrānti.					
		Day.	Week day.	H. M. S.	*a*	*b*	*c*		Day.	Week day.	H. M. S.	*a*	*b*	*c*
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Chaitra	Mîna-saṁ. (*of previous year*). Mēsha-saṁ.	0	0	0 0 0	0	0	0	Mēsha-saṁ.	0	0	0	0	0	0
2. Vaiśākha	Vṛishabha-saṁ	30	(2)	22 21 9	474·3381	122·5490	84·6833	Vṛishabha-saṁ.	30	(2)	22 21 9	474·3381	122·5490	84·6833
3. Jyēshṭha	Mithuna-saṁ.	62	(6)	8 15 57	1111·7956	262·5752	170·6856	Mithuna-saṁ.	31	(3)	9 54 48	637·4575	140·0262	86·0023
4. Āshāḍha	Karka-saṁ.	93	(2)	23 12 15	1820·1580	410·2049	257·2610	Karka-saṁ.	31	(3)	14 56 18	708·3624	147·6297	86·5754
5. Śrāvaṇa	Siṁha-saṁ.	125	(6)	10 42 48	2480·1360	552·6492	343·4452	Siṁha-saṁ.	31	(3)	11 30 33	659·9780	142·4443	86·1842
6. Bhādrapada	Kanyā-saṁ.	156	(2)	11 41 2	2991·4178	679·1575	428·4273	Kanyā-saṁ.	31	(3)	0 58 15	511·2818	126·5083	84·9821
7. Āśvina	Tulā-saṁ.	186	(4)	22 35 29	3304·2747	784·4003	511·8051	Tulā saṁ.	30	(2)	10 54 27	312·8569	105·2428	83·3778
8. Kārttika	Vṛiśchika-saṁ.	216	(6)	20 28 50	3433·4472	869·9574	593·6979	Vṛiśchika-saṁ.	29	(1)	21 53 21	129·1725	85·5571	81·8928
9. Mārgaśira	Dhanus-saṁ.	246	(1)	8 0 47	3416·4906	939·8537	674·4092	Dhanus-saṁ.	29	(1)	11 31 57	9983·0434	69·8963	80·7113
10. Pausha	Makara-saṁ.	275	(2)	16 6 58	3351·2241	4·5725	754·7299	Makara-saṁ.	29	(1)	8 6 11	9934·7335	64·7188	80·3207
11. Māgha	Kumbha-saṁ.	305	(4)	2 49 9	3322·5644	73·2145	835·3466	Kumbha-saṁ.	29	(1)	10 42 11	9971·3403	68·6420	80·6167
12. Phālguna	Mîna-saṁ.	334	(5)	22 4 25	3414·5580	154·7871	916·9387	Mîna-saṁ.	29	(1)	19 15 16	91·9936	81·5726	81·5921
1. Chaitra (*of following year*).	Mēsha-saṁ. (*of following year*).	365	(1)	6 12 9	3688·2056	255·8315	1000·0	Mēsha-saṁ. (*of following year*).	30	(2)	8 7 44	273·6476	101·0407	83·0608

TABLE LXXXIII B.

VALUE OF *c* AND OF "EQUATION *c*" AT THE SEVERAL TRUE SAṀKRĀNTIS.

Correct for K. Y. 4000, A. D. 899-900.

c in 1,000ths of circle, "equation c" in 10,000ths.

Saṁkrānti.	c	"Equation c."
Mēsha-saṁ. .	277·6064	0·9037
Vṛishabha-saṁ. .	362·2899	14·4355
Mithuna-saṁ. .	448·2921	41·1356
Karka-saṁ. .	534·8676	73·5542
Siṁha-saṁ. .	621·0519	102·0578
Kanyā-saṁ. .	706·0241	118·5381
Tulā-saṁ. .	789·4020	118·9561
Vṛiśchika-saṁ. .	871·2948	104·1144
Dhanus-saṁ. .	952·0062	78·3666
Makara-saṁ. .	32·3264	48·2336
Kumbha-saṁ. .	112·9432	21·0624
Mīna-saṁ. .	194·5355	3·6494

TABLE LXXXIII C.

EXACT VALUE OF *c* AND OF "EQUATION *c*" AT THE MOMENT OF TRUE MĒSHA-SAṀKRĀNTI AT BEGINNING OF EACH CENTURY K. Y.

c in 1,000ths of circle. "Equation c" in 10,000ths.

K. Y.	A. D.	c	"Eqn. c."
3700	599-600	277·6399	0·9347
3800	699-700	277·6287	0·9340
3900	799-800	277·6175	0·9333
4000	899-900	277·6064	0·9326
4100	999-1000	277·5952	0·9319
4200	1099-1100	277·5840	0·9312
4300	1199-1200	277·5728	0·9305

TABLES LXXXIV, LXXXV.

"EQUATION *b*" AND "EQUATION *c*" IN WHOLE NUMBERS BY THE BRAHMA-SIDDHÂNTA AND SIDDHÂNTA-SIRÔMAṆI.

Corresponding to Tables VI, VII, "Indian Calendar."

For close detail Tables LV, LVI, (*Vol. XV above*) are to be used.

"Arg."=moon's (*b*) or sun's (*c*) mean anom. in 1000ths of circle.

TABLE LXXXIV.

LUNAR "EQUATION *b*."

Arg.	Eqn.	Arg.
0	140	500
10	149	490
20	158	480
30	166	470
40	174	460
50	183	450
60	191	440
70	199	430
80	207	420
90	214	410
100	222	400
110	229	390
120	235	380
130	241	370
140	247	360
150	253	350
160	258	340
170	262	330
180	266	320
190	270	310
200	273	300
210	275	290
220	277	280
230	279	270
240	279	260
250	280	250

Arg.	Eqn.	Arg.
500	140	1000
510	131	990
520	122	980
530	114	970
540	105	960
550	97	950
560	88	940
570	80	930
580	73	920
590	65	910
600	58	900
610	51	890
620	44	880
630	38	870
640	32	860
650	27	850
660	22	840
670	17	830
680	13	820
690	10	810
700	7	800
710	4	790
720	2	780
730	1	770
740	0	760
750	0	750

TABLE LXXXV.

SOLAR "EQUATION *c*."

Arg.	Eqn.	Arg.
0	60	500
10	56	490
20	53	480
30	49	470
40	46	460
50	42	450
60	38	440
70	34	430
80	31	420
90	28	410
100	25	400
110	22	390
120	19	380
130	16	370
140	14	360
150	12	350
160	9	340
170	7	330
180	6	320
190	4	310
200	3	300
210	2	290
220	1	280
230	0	270
240	0	260
250	0	250

Arg.	Eqn.	Arg.
500	60	1000
510	64	990
520	68	980
530	72	970
540	75	960
550	79	950
560	82	940
570	86	930
580	89	920
590	93	910
600	96	900
610	99	890
620	102	880
630	104	870
640	107	860
650	109	850
660	111	840
670	113	830
680	115	820
690	117	810
700	118	800
710	119	790
720	120	780
730	120	770
740	121	760
750	121	750

AUXILIARY TABLE.

Difference in Equation.	Last figure of argument								
	9	8	7	6	5	4	3	2	1
	Add or substract								
9	8	7	6	5	4 or 5	4	3	2	1
8	7	6	6	5	4	3	2	2	1
7	6	6	5	4	3 or 4	3	2	1	1
6	5	5	4	4	3	2	2	1	1
5	4 or 5	4	3 or 4	3	2 or 3	2	1 or 2	1	0 or 1
4	4	3	3	2	2	2	1	1	0
3	3	2	2	2	1 or 2	1	1	1	0
2	2	2	1	1	1	1	1	0	0
1	1	1	1	1	0 or 1	0	0	0	0

TABLE LXXXVI.

VALUE OF *a*, *b*, *c* AT BEGINNING OF CENTURIES OF THE KALIYUGA, BY THE BRAHMA-SIDDHĀNTA.

K.Y. Century.	Beginning in A.D.	Week-day.	*a*	*b*	*c*
37	599	0	6028·1929	719·2529	282·9906
38	699	6	4900·0921	308·0530	283·3962
39	799	6	3433·3593	860·5614	281·0640
40	899	6	2305·2584	449·3615	281·4695
41	999	6	1177·1576	38·1616	281·8751
42	1099	6	49·0567	626·9616	282·2807
43	1199	0	8920·9559	215·7617	282·6863

TABLE LXXXVII.

INCREASE OF *a*, *b*, *c* FOR YEARS OF KALIYUGA CENTURY.

* = *year of 366 days.*

Year.	Week-day.	*a*	*b*	*c*	Year.	Week-day.	*a*	*b*	*c*
0	0	0	0	0	30	3	729·2961	683·8984	0·6759
1	1	3600·6747	246·4522	999·2925	31	4	4329·9708	930·3505	999·9683
*2	2	7201·3494	492·9043	998·5849	32	5	7930·6455	176·8027	999·2608
3	4	1140·6560	775·6482	0·6151	*33	6	1531·3202	423·2549	998·5533
4	5	4741·3307	22·1003	999·9076	34	1	5470·6268	705·9987	0·5835
5	6	8342·0054	268·5525	999·2001	35	2	9071·3015	952·4509	999·8759
*6	0	1942·6800	515·0047	998·4925	36	3	2671·9762	198·9030	999·1684
7	2	5881·9867	797·7485	0·5227	*37	4	6272·6509	445·3552	998·4609
8	3	9482·6614	44·2007	999·8152	38	6	211·9575	728·0990	0·4911
9	4	3083·3360	290·6528	999·1077	39	0	3812·6322	974·5512	999·7836
*10	5	6684·0107	537·1050	998·4001	40	1	7413·3069	221·0034	999·0760
11	0	623·3174	819·8488	0·4303	*41	2	1013·9815	467·4555	998·3685
12	1	4223·9921	66·3010	999·7228	42	4	4953·2882	750·1994	0·3987
*13	2	7824·6667	312·7532	999·0153	43	5	8553·9629	996·6515	999·6912
14	4	1763·9734	595·4970	1·0455	*44	6	2154·6376	243·1037	998·9836
15	5	5364·6481	841·9492	0·3379	45	1	6093·9442	525·8475	1·0138
16	6	8965·3227	88·4013	999·6304	46	2	9694·6189	772·2997	0·3063
*17	0	2565·9974	334·8535	998·9229	47	3	3295·2936	18·7519	999·5988
18	2	6505·3041	617·5973	0·9531	*48	4	6895·9682	265·2040	998·8912
19	3	105·9788	864·0495	0·2455	49	6	835·2749	547·9479	0·9214
20	4	3706·6534	110·5017	999·5380	50	0	4435·9496	794·4000	0·2139
*21	5	7307·3281	356·9539	998·8305	51	1	8036·6243	40·8522	999·5064
22	0	1246·6348	639·6977	0·8607	*52	2	1637·2989	287·3044	998·7988
23	1	4847·3094	886·1499	0·1531	53	4	5576·6056	570·0482	0·8290
24	2	8447·9841	132·6020	999·4456	54	5	9177·2803	816·5004	0·1215
*25	3	2048·6588	379·0542	998·7381	55	6	2777·9549	62·9526	999·4140
26	5	5987·9655	661·7980	0·7683	*56	0	6378·6296	309·4047	998·7064
27	6	9588·6401	908·2502	0·0607	*57	2	317·9363	592·1485	0·7366
28	0	3189·3148	154·7024	999·3532	58	3	3918·6110	838·6007	0·0291
*29	1	6789·9895	401·1545	998·6457	59	4	7519·2856	85·0529	999·3216

TABLE LXXXVII—*Contd.*

Year.	Week-day.	*a*	*b*	*c*
*60	5	1119·9603	331·5051	998·6140
61	0	5059·2670	614·2489	0·6442
62	1	8659·9416	860·7011	999·9367
63	2	2260·6163	107·1532	999·2292
*64	3	5861·2910	353·6054	998·5216
65	5	9800·5977	636·3492	0·5518
66	6	3401·2723	882·8014	999·8443
67	0	7001·9470	129·2536	999·1368
*68	1	602·6217	375·7057	998·4292
69	3	4541·9283	658·4496	0·4594
70	4	8142·6030	904·9017	999·7519
*71	5	1743·2777	151·3539	999·0444
72	0	5682·5844	434·0977	1·0746
73	1	9283·2590	680·5499	0·3670
74	2	2883·9337	927·0021	999·6595
*75	3	6484·6084	173·4542	998·9520
76	5	423·9150	456·1981	0·9822
77	6	4024·5897	702·6502	0·2746
78	0	7625·2644	949·1024	999·5671
*79	1	1225·9391	195·5546	998·8596
80	3	5165·2457	478·2984	0·8898
81	4	8765·9204	724·7506	0·1822
82	5	2366·5951	971·2027	999·4747
*83	6	5967·2698	217·6549	998·7672
84	1	9906·5764	500·3987	0·7974
85	2	3507·2511	746·8509	0·0898
86	3	7107·9258	993·3031	999·3823
*87	4	708·6004	239·7552	998·6748
88	6	4647·9071	522·4991	0·7050
89	0	8248·5818	768·9512	999·9974
90	1	1849·2565	15·4034	999·2899
*91	2	5449·9311	261·8556	998·5824
92	4	9389·2378	544·5994	0·6126
93	5	2989·9125	791·0516	999·9050
94	6	6590·5871	37·5038	999·1975
*95	0	191·2618	283·9559	998·4900
96	2	4130·5685	566·6997	0·5202
97	3	7731·2431	813·1519	999·8126
98	4	1331·9178	59·6041	999·1051
*99	5	4932·5925	306·0563	998·3976
100	0	8871·8992	588·8001	0·4278

TABLE LXXXVIII.

VALUES OF *a*, *b*, *c* PER DAY FROM MĪNA 1 TO MĒSHA 2, THE DAY OF MEAN MĒSHA-SAṀKRĀNTI.

No. of days interval from 0 Mēsha.	Month and day.	Week-day.	*a*	*b*	*c*
1	2	3	4	5	6
29	Mīna 1	4	9502·4085	874·9589	915·1286
28	„ 2	5	9841·0404	911·2506	917·8664
27	„ 3	6	179·6724	947·5422	920·6042
26	„ 4	0	518·3044	983·8339	923·3419
25	„ 5	1	856·9364	20·1255	926·0797
24	„ 6	2	1195·5684	56·4172	928·8175
23	„ 7	3	1534·2004	92·7088	931·5553
22	„ 8	4	1872·8324	129·0005	934·2931
21	„ 9	5	2211·4643	165·2921	937·0309
20	„ 10	6	2550·0963	201·5838	939·7687
19	„ 11	0	2888·7283	237·8754	942·5065
18	„ 12	1	3227·3603	274·1671	945·2442
17	„ 13	2	3565·9923	310·4587	947·9820
16	„ 14	3	3904·6243	346·7504	950·7198
15	„ 15	4	4243·2563	383·0420	953·4576
14	„ 16	5	4581·8882	419·3336	956·1954
13	„ 17	6	4920·5202	455·6253	958·9332
12	„ 18	0	5259·1522	491·9169	961·6710
11	„ 19	1	5597·7842	528·2086	964·4088
10	„ 20	2	5936·4162	564·5002	967·1465
9	„ 21	3	6275·0482	600·7919	969·8843
8	„ 22	4	6613·6801	637·0835	972·6221
7	„ 23	5	6952·3121	673·3752	975·3599
6	„ 24	6	7290·9441	709·6668	978·0977
5	„ 25	0	7629·5761	745·9585	980·8355
4	„ 26	1	7968·2081	782·2501	983·5733
3	„ 27	2	8306·8401	818·5418	986·3111
2	„ 28	3	8645·4721	854·8334	989·0488
1	„ 29	4	8984·1040	891·1251	991·7866
	Mēsha 0	5	9322·7360	927·4167	994·5244
	„ 1	6	9661·3680	963·7084	997·2622
	„ 2	0	0	0	0

TABLE LXXXIX.

Sun's equation of the centre and sine-values according to the Brahma-Siddhánta.

Serial No. of sine.	Sun's mean anom.				Sine of anom. angle. Value in minutes.	Sine of anom. angle. Diff.	Equation.			Equation. Difference per minute of anom.	Sun's mean anom.				Serial No. of sine.
1	2				3	4	5			6	7				1
	°	'	°	'	'	'	°	'	"	"	°	'	°	'	
0	0	0	180	0	0	214	0	0	0	2·27̇	180	0	360	0	0
1	3	45	176	15	214	213	0	8	32·50	2·2760	183	45	356	15	1
2	7	30	172	30	427	211	0	17	2·61	2·2458	187	30	352	30	2
3	11	15	168	45	638	208	0	25	27·92	2·2128	191	15	348	45	3
4	15	0	165	0	846	205	0	33	46·05	2·1822	195	0	345	0	4
5	18	45	161	15	1051	200	0	41	57·02	2·1287	198	45	341	15	5
6	22	30	157	30	1251	195	0	49	55·97	2·0755	202	30	337	30	6
7	26	15	153	45	1446	189	0	57	42·97	2·0117	206	15	333	45	7
8	30	0	150	0	1635	182	1	5	15·60	1·9372	210	0	330	0	8
9	33	45	146	15	1817	174	1	12	31·46	1·8520	213	45	326	15	9
10	37	30	142	30	1991	165	1	19	28·17	1·7562	217	30	322	30	10
11	41	15	138	45	2156	156	1	26	3·32	1·6604	221	15	318	45	11
12	45	0	135	0	2312	147	1	32	16·92	1·5646	225	0	315	0	12
13	48	45	131	15	2459	135	1	38	8·96	1·4369	228	45	311	15	13
14	52	30	127	30	2594	125	1	43	32·27	1·3305	232	30	307	30	14
15	56	15	123	45	2719	113	1	48	31·62	1·2028	236	15	303	45	15
16	60	0	120	0	2832	101	1	53	2·24	1·0750	240	0	300	0	16
17	63	45	116	15	2933	88	1	57	4·12	0·9367	243	45	296	15	17
18	67	30	112	30	3021	75	2	0	34·87	0·7982	247	30	292	30	18
19	71	15	108	45	3096	63	2	3	34·49	0·6706	251	15	288	45	19
20	75	0	105	0	3159	48	2	6	5·36	0·5184	255	0	285	0	20
21	78	45	101	15	3207	35	2	8	1·99	0·3651	258	45	281	15	21
22	82	30	97	30	3242	21	2	9	24·14	0·2235	262	30	277	30	22
23	86	15	93	45	3263	7	2	10	14·43	0·0745	266	15	273	45	23
24	90	0	90	0	3270		2	10	31·19		270	0	270	0	24

No. 12.—THE KEDARPUR PLATE OF SRI-CHANDRA-DEVA.

BY NALINI KANTA BHATTASALI, M.A., CURATOR, DACCA MUSEUM.

In the October number of the *Dacca Review*, for 1912, Mr. J. T. Rankin, I.C.S., published a note given him by the late lamented scholar Bābu Gaṅgāmōhan Laskar, M.A., on a copper-plate inscription of **Śrī-Chandra-Dēva** found at **Idilpur** in the Faridpur District of Bengal. This note for the first time established the fact that a **Buddhist** line of kings with the suffix "Chandra" at the end of their names had ruled in **East Bengal** with **Vikramapura** as their capital about the 10th or 11th century of the Christian Era and votaries of antiquarian studies in Bengal have been busy thenceforth, discussing the position of the **Chandra** kings of Vikramapura in the chronology of their country. The discovery of a second copper-plate of Śrī-Chandra-Dēva at **Rāmpāl** in the Munshiganj sub-division of the Dacca District in April, 1913, by Prof. Rādhā-Gōvinda Basāk, M.A., gave a further impetus to the discussion. Prof. Basāk published this plate first in the *Śrāvaṇa* and *Bhādra* number of the vernacular magazine *Sāhitya* for 1320 B.S. and finally in the *Epigraphia Indica*, above, Vol. XII, page 136.

The present plate is the third of Śrī-Chandra-Dēva. It was found in April, 1919, in excavating earth from a ditch at **Kēdārpur** in the Mādāripur sub-division of the Faridpur District of Bengal. It was preserved in the custody of the second teacher of the Kēdārpur Middle English School. I came to know of the find from a friend and it has been obtained for the Dacca Museum by the Hon'ble Mr. T. Emerson, C.I.E., I.C.S., through the kind efforts of Mr. J. N. Roy, I.C.S., Magistrate of Faridpur, and Mr. N. Sen, Sub-Divisional Officer of Mādāripur.

The plate measures $8\frac{1}{8}'' \times 7\frac{1}{4}''$, and is therefore slightly smaller than the plate published by Mr. Basāk, which measures $9\frac{1}{8}'' \times 8''$. The Royal **Seal** of the Chandras is attached to the middle of the top of the plate. It displays the *Wheel of the Law* with two couchant deer on the two sides, symbolical of the first "Turning of the Wheel of the Law" at the Deer Park,—the present Sārnāth near Benares. It is noteworthy that the **Pālas** of Bengal who preceded the Chandras, and who were **Buddhists** as well, had similar devices on their seals. The name of *Śrī Śrī-Chandra-Dēva*[*ḥ*] is written in relief below the Wheel in the present seal.

The plate is incomplete and appears to be **no grant at all, but only a plate kept ready, with the stereotyped portion of the grant inscribed** in the office of issue, to be filled in with the necessary remaining portions as occasion arose. The plate is full of engraver's mistakes of a serious nature. It may be noted that Kēdārpur, where this plate was found, contains the ruins of a royal settlement surrounded by a broad ditch as well as a big silted up tank, commonly associated with the memory of Kedār Rāy, one of the famous twelve chieftains who ruled Bengal before the country was completely dominated by the Mughals. Kedār Rāy had his capital at Śrīpur, which, from the description of Ralph Fitch, appears to have been a flourishing town in 1585; and the reasonableness of having a second capital, only a few miles off, is not very apparent. Of course a thousand and one contingencies might have taken the present plate to Kēdārpur, where it has now been found, but the find of this unfinished plate also makes it possible that the ruins at Kēdārpur may be those of the Chandras who preceded Kedār Rāy by no less than five hundred years.

The plate is inscribed on one side only and there is a vacant space of about two inches at the bottom. The inscription contains 18 lines of writing. The letters are ·24 to ·30 inch in height and are in most places well inscribed. Mistakes of engraver or scribe are, however,

numerous and they have rendered the preparation of a correct text an undertaking of exceptional difficulty.[1]

The inscription refers to the reign of **Śrī-Chandra-Dēva** of the **Chandra family** of Kings who held sovereignty in East Bengal for some decades before the rise of the **Varmans** and the **Sēnas** in that part of the country, towards the end of the **Pāla** rule in North Bengal. It is written in what may be called the **Bengali Script** of the 10th-11th century A.D. The language of the inscription is correct **Sanskrit** verse, except in the portions spoiled by engraver's mistakes. The last three lines are in prose.

There is nothing very special as regards orthography. The use of *va* for *ba* is almost the rule in the later East Indian epigraphs, there being no discrimination between them, as in the modern Bengali language. The *avagraha* is once used and once omitted. The spelling of the word *nistrinśa* with *n* is remarkable. Superimposed *r* has doubled almost all consonants.

From a comparison of the abstract of the Idilpur plate of Śrī-Chandra published in the *Dacca Review*, referred to above, with the contents of the present plate, it is evident that the two plates are copies of the same draft. The Idilpur plate seems to have an extra *Ślōka* towards the end, borrowed from Śrī-Chandra's Rāmpāl plate, which is otherwise the copy of a draft different from that of the Idilpur and the Kēdārpur plates. It should be noted, however, that the opening invocatory *Ślōka* is identical in all the three plates.

Śrī-Chandra seems to have been the only king of the Chandra family who was powerful enough to issue copper-plate grants, as the three plates hitherto discovered are all in his name. In order, therefore, to bring together all the epigraphical material available for his history, I quote below the necessary portions from Bābu Gaṅgāmōhan Laskar's abstract of the Idilpur plate, as published in the *Dacca Review*. The plate is reported to exist still; but it is in the custody of people who are unwilling to show it to anybody again.

[2] "The inscription gives the names of three kings :—(1) **Suvarṇṇa-Chandra.** (2) His son **Trailōkya-Chandra.** (3) Trailokya-Chandra's son **(Śrī)-Chandra-Dēva.** The last of these kings issues a command from his victorious camp at **Vikrampur** making a gift of certain lands at the village called **Leliyā** in the **Kumāratālakā** sub-division (*maṇḍala*) of the **Satata-Padmāvāṭi** district (*vishaya*). The nāme Satata-Padmâvāṭi literally means 'with-bank-Padmā-house' and was most probably the name of a district on the banks of the Padmā river. The names of some of the donees are still legible and the measures of the area of the granted lands are called *drōṇas* and *pāṭakas*, as in the Āsrafpur plates. Paramount titles such as *Paramēśvara*, *Paramabhaṭṭāraka* and *Mahārājādhirāja* are attached to the names of (Śrī)-Chandra-Dēva. The title Parama-Saugata (the devout worshipper of Sugata, *i.e.* Buddha) is prefixed to the name of the donor. The characters used are probably of the 12th century type of the Bengali alphabet. The seal attached to the top of the plate resembles the seals found on the plates of the Pāla kings of Bengal. The inscription under notice is very important, as it, like the Āsrafpur plates of Dēvakhaḍga, shows the existence of Buddhist kingdoms in East Bengal in the period not much anterior to the conquest of Bengal by the Mussalmans.

" . . . . . The plate is inscribed on one side fully and on another side partly. The writing on the second side has become almost defaced. This defaced portion contains the names of the donee and the particulars of the lands granted. There are altogether 36 lines of writing. An analysis is given below :—

Lines 1-4. Contain a verse in honour of Buddha, probably.

---

[1] I should gratefully acknowledge here the help that I have received in this respect from Prof. Abhayā Charaṇ Chakravarti, M.A., of the Jagannāth College, Dacca, without whose help I could hardly have made any headway, especially with the passages that are marred by the engraver's mistakes. I also owe some improvements in the reading of the text to the suggestions of my friend Prof. Basāk, in whose company I had the opportunity of revising my first transcription.

[2] [In this extract, the diacritical marks, according to the latest emendation, have been adopted.—H. K. S.]

Lines 4-5. State that there was a king named Suvarṇṇa-Chandra who was neither purified in fire nor measured on the scales (like gold) but was by nature endowed with greatness (heaviness) and whose deeds were good.

Lines 5-6. State in a verse why the king was called Suvarṇṇa-Chandra.

Lines 6-9. The above king got a son named Trailōkya-Chandra, whose look was sacred, who was afraid of the next world, by whom the living world was consoled, whose meritorious deeds were well known throughout the three worlds.

Lines 9-10. Some further epithets of the same king who satisfied his desire of conquering the whole world and who extinguished the fire of his enemies.

Lines 11-13. More eulogistic epithets (of Trailōkya-Chandra-Dēva).

Lines 14-15. The above king had a son named (Śrī)-Chandra who was like Indra and whose prowess was like Indra and who was born at the auspicious moment and the signs at whose birth were indicative of royal fortune.

Lines 15-18. Some eulogistic epithets of (Śrī)-Chandra-Dēva.

Lines-18-19. From the victorious camp pitched at Vikramapura,

Line 20, the devout worshipper of Sugata (Buddha), the meditator of the feet of (*i.e.* the son of) *Mahārājādhirāja* Trailōkya-Chandra-Dēva, the *Paramēśvara*, the *Paramabhaṭṭāraka*,

Line 21, the *Mahārājādhirāja*, the *Śrīmān*, Śrī-Chandra-Dēva, being in good health and having done honour to all the following royal officers and villagers assembled at the village of Leliyā,

Line 22, in the Kumāratālakā-maṇḍala of Sataṭa-Padmāvā(ṭi) district,

Line 28, thus commands the above officers . . . .

Lines 29-30. Contain the names of the donees."

The following is an abstract of the present **Kēdārpur** plate :—

The inscription opens with a salutation to the **Buddha**, the **Dharmma**, and the **Saṅgha**,—the three jewels of the Buddhist faith. It then goes on to say that there was one **Pūrṇṇa-Chandra** by name who was the possessor of large forces. He was neither of royal birth nor of pure caste, but he obtained a son **Suvarṇṇa-Chandra** by name, resplendent as gold (v. 3). Suvarṇṇa-Chandra was a famous man of religious character, and his son was **Trailōkya-Chandra** (v. 4). Trailōkya's conquests extended far and wide and he was a terror to his foes (v. 5). Trailōkya's son was **Śrī-Chandra** who was extremely virtuous (v. 6). He was a great conqueror whose fame at arms had reached the heavens (v. 7). With this last king Śrī-Chandra-Dēva who was to have issued this plate from his victorious capital at **Śrī-Vikramapura** the inscription stops.

I edit the inscription from the original plate, now in the Dacca Museum.

Seal.

श्री श्रीचन्द्रदेव[:।]

TEXT.

1 सिद्धिरस्तु[1] स्वस्ति । सम्बो जिनः स भगवान् कारुणैकपात्रं

2 धम्मो[2]प्यसै[3] विजयते जगदेकदीपः [।*] यत्सेवया

[1] Expressed by a symbol. [This symbol is generally taken for *oṁ*, but the writer has put forward arguments in his article "Some Image Inscriptions from East Bengal" published below in favour of this symbol being read '*Siddhir=astu.*'—Ed.]

[2] Read धर्म्मो.

[3] Read सौ.

3 सकल एव महानुभावः संसारपारमुपगच्छति भिक्षुसंघः[1] ॥[१*] पूर्व्व-
4 चन्द्र इति श्रीमानासीदासीदत्र रजः । यस्योचव[2]योच[3]त्ह[त]मातपत्रमपत्र
5 पाः[4]॥ [२*] नाम्ना विग्रहो न तुलाधिरूढ़ः किन्तु प्रकृत्यैव युतो
 गरिम्णा । तथापि क-
6 ल्याणसुवर्णकल्पः सुवर्णचन्द्रस्सुजतो ततोभूत्[5] ॥[३*] पुण्यावलोकः परलो-
7 कभीरोर्लोक्यः समाश्वासितजीवलोकः [।*] त्रैलोक्यसंकीर्त्तितपुण्यकीर्त्तिः त्रै-
8 लोक्यचन्द्रोऽस्य ब(ब)भूव पुत्रः[6] ॥[४*] चतुःपयोराशिसमासपृथ्वीजयाभिलाषो वि-
9 पक्षलुब्धः [।*] युद्धेषु निस्त्रिंशलताजलेन यो वैरिवह्निं स[7]मयाञ्च
 कार[8] ॥[५*]
10 श्रीमान् श्रीचन्द्रदेवः समजनि तनयस्तस्य सद्धर्म्मब(ब)न्धोः शूराक्रमी स[9]याशुः
11 परगुणमुखरो दोषवादैकमूकः [।*] प्रेक्ष्यः पौनो गुणानां निधिरिति
12 विषयासक्तिपर्य्याविपक्षे यस्मिना(न्ना)धत्त वेधा[10] श्रियमतिरभसादर्थतो ना-
13 मतश्च[11] ॥[६*] स्पृष्टः पार्थिवपांसुदोहरसस्रयांचनदिग्गजै[12]र्नैत्राणामनिमे-
14 षतः परिहृतो दूरेण वृन्दारकैः [।*] केशैश्चत्सरसामपूर्व्वपलितभ्रान्तिं
15 समारोपयन् सन्तानो रजसां रणेसु[13]षु जयिनो यस्य क्षुमार्ग्गं
 गतः[14] ॥ [७*]
16 स खलु श्रीविक्रमपुरसमावासितश्रीमज्जयस्कन्धावारात् परमसौगतो
17 महाराजाधिराजः श्रीत्रैलोक्यचन्द्रदेवपादानुध्यातः परमेश्वरः प-
18 रमभट्टारको महाराजाधिराजः श्रीमान् श्रीचन्द्रदेवः कुशली ।

TRANSLATION.

(Line 1.) May success attend! May welfare accrue!

(Verse 1.) Adorable is the Lord Jina, the only receptacle of mercy. Victorious also is the Law, the only light of the world. By worshipping them, all the high-minded Congregation of Bhikshus cross to the other side of the world.

---

1 Metre: Vasantatilakā.

2 Read च.

3 Read चि. [This corrupt *pāda* has not been properly interpreted. The letter ह after त्र (?) is not seen on the impression. A plausible emendation which I would offer, with much hesitation though, is यस्या[दपि]च[:*]चि[चे*]षुः[स्म] and translate the passage thus: 'afraid of which (*i.e.* dust) the enemy (kings) sought refuge under his parasol giving up (all) shame.'—H. K. S.]

4 Read पं. Metre: Anushṭubh.

5 Metre: Upajāti.

6 Metre: Indravajrā.

7 Read म.

8 Metre: Upajāti.

9 Read द.

10 Read वेधाः.

11 Metre: Sragdharā.

12 This line is proposed to be thus restored:—स्पृष्टः पार्थिवपांसुदोहरसतयापार्थैर्दिग्गजैः

13 Delete षु.

14 Metre: Śārdūlavikrīḍita.

(Verse 2.) There was one **Pūrṇṇa-Chandra** by name, favoured of the Goddess of fortune, the bold canopy of dust raised by whose vanguard (in battle) was welcomed by the wives of the Sun-God.[1]

(Verse 3.) By nature endowed with majesty, he was neither purified in fire (like gold or kings[2]) nor weighed in balance (like gold or like kings); yet from him came forth the meritorious **Suvarṇṇa-Chandra** resplendent as gold.

(Verse 4.) Of him, who was afraid of sinning against the other world and whose sacred fame was sung throughout the three worlds, was born the son **Trailōkya-Chandra,** the (mere) sight of whom was meritorious,—who was beautiful to look at, and who was a solace to mankind.

(Verse 5.) Not fond of (the possession of) *vishayas* (districts) [or, devoid of covetousness], but bent on conquering the (whole) earth limited by the four oceans, he put out in battles the fire, *viz.* his foes, by water, *viz.* his creeper-like sword.

(Verse 6.) To him, who was a friend of the right path, was born a son, the prosperous **Śrī-Chandra-Dēva** who was kind (even) towards mischievous endeavours, full of praise for others' good qualities, (but) absolutely dumb to the exposition of (others') faults; a well-built figure, pleasant to the sight and a repository of all virtues. Him, who was averse to all worldly attractions (*vishay-āsakti*), the Disposer forcibly endowed with Śrī (fortune) both in name and in reality.

(Verse 7.) The multitude of dust particles raised by the victorious (king) in battles, met by the Elephants, the lord of the (ten) quarters completely engrossed by the proud desire of coming in contact with the (aforesaid) kingly dust,[3] and avoided from a distance by the gods whose eyes could not close (against it), proceeded towards heaven, causing on the hair of the heavenly nymphs the unprecedented illusion of whiteness of old age.

(Lines 16 to 18.) From his prosperous and victorious capital established at Śrī-Vikramapura, he, the devout worshipper of Sugata, the Paramēśvara (great lord) Paramabhaṭṭāraka, (the great protector) Mahārājādhirāja (the paramount sovereign), the illustrious Śrī-Chandra-Dēva, who meditates on the feet of the Mahārājādhirāja Śrī-Trailōkya-Chandra-Dēva, in good health—.

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[1] [See above, page 191, note 3.—Ed.]

[2] [The so-called Agnikula Kshatriyas.—Ed.]

[3] [पार्थिवपांसु is the dust of the Earth. It is a well-known fact that elephants are fond of playing with dust.—Ed.]

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No. 13.—A NOTE ON THE DATES OF THE GUPTA COPPER PLATES FROM DAMODARPUR.

BY K. N. DIKSHIT, M.A.

The discovery of the Damodarpur plates has thrown new light on the fortunes of the Gupta dynasty in Eastern India. The plates have been edited by Mr. Radha Govinda Basak above, Vol. XV., pages 113-145. I wish here to point out certain inaccuracies in the readings of the dates as read by Mr. Basak, which I first noticed when I read his paper and subsequently verified by reference to the original plates, now preserved in the Varendra Research Society's Museum at Rajshahi.

The date of the second plate which has been read by Mr. Basak as 129 is to be read as 128. The unit figure which is a vertical line with a slight bend, and a seriph or small horizontal line at the top end, must be taken as the symbol for 8, while the symbol for 9 has a loop at the top.

The fifth plate has lost the name of the reigning Gupta sovereign, but the date has been fairly well preserved. It has been read as 214; but I see no trace of a 'ten' in the second figure, but a clear '*tha*' denoting 20, the date thus being 224. That some Gupta sovereign held sway over North Bengal as late as 224 G.E. or 543 A.D., that is eleven years after the date of the Mandasor pillar inscription of Yaśōdharman (532 A.D.) is an important result. It is no longer possible to assume with Mr. Basak that the Gupta Emperor who made the grant was Bhānugupta,[1] as the difference between the date of the plate and the only known date for Bhānugupta (*viz.*, 191 Gupta Era) is now 33 years. The fourth and fifth plates seem to be separated by a wider margin than that existing between any other two plates of the Damodarpur find. The intervening period of sixty years, roughly 164—224 Gupta Era (=483—543 A.D.) witnessed the gradual diminution of the Gupta dominion and the slow shifting of the centre of their power to the east. It also witnessed the rise and fall in succession of the Hūṇa chieftains Tōramāna and Mihirakula, and the transitory success of the Mālava chief Vishṇuvardhana Yaśōdharman. Other dynasties like the 'Vardhana' kings of Thanesvar and the Maukhari rulers of Kōsala were coming into power on the western outskirts of the Gupta Empire, the latter dynasty in particular having carried on an incessant warfare in Oudh and adjacent regions with the Guptas. It was probably the ascendancy of the Maukhari rulers in Ayōdhyā that drove the 'noble born' Amṛitadēva (the donor of the fifth Damodarpur plate) from his native place Ayōdhyā to the distant Pauṇḍravardhana province, which may seem to have been one of the last retreats of the Imperial Guptas. The Jaunpur inscription of the time of the Maukhari Īśvaravarman, though not dated, must belong to the same period as the fifth Damodarpur plate, as we know from the Haraha inscription that Īśvaravarman's son Īśānavarman had fully established himself in Oudh by 555 A.D.

No. 14.—SOMALAPURAM GRANT OF VIRUPAKSHA: SAKA 1389.

BY K. V. SUBRAHMANYA AIYAR, B.A., M.R.A.S., OOTACAMUND.

This set of three copper-plates, marked No. 2 in Appendix A of Rao Bahadur H. Krishna Sastri's Annual Report on Epigraphy for 1913-14,[2] is edited below for the first time with the help of one set of impressions kindly placed at my disposal by him.

The plates are reported to belong to a Kuruba ryot of Sōmalāpura in the Bellary taluka of the Bellary District. They were unearthed years ago while digging foundations for a house; but were secured in 1913, for the examination of the Assistant Archæological Superintendent,

[1] [The reading at the end of l. 1 in Plate V of the Damodarpur Plates is probably Kumāra.—Ed.]

[2] See also p. 95, paragraph 25, of the same report.

Southern Circle, through the kind offices of the Tahsildar of the taluka, by the then Kanarese Epigraphical Student, Mr. K. Rama Sastri. Regarding the description of the plates Mr. Krishna Sastri has made the following note on the cover of the ink-impressions he sent to me:—

"Three plates with rounded tops of which the first and last are written on the inner sides only. They are held together by a ring which passes through a round hole bored at the top of each plate. On the ring, which is nearly 2⅜" in diameter and ⅛" in thickness, slides a circular seal shaped like a signet ring. The seal measures 1¼" in diameter and bears in relief on its surface at the top the sun and the crescent and a standing boar facing the proper left. Below it is what looks like a floral device. The plates measure 8¼" by 6⅞". The circular top measures 1⅛" from the base to the middle of the arc."

The plates are written in the **Nandi-Nāgarī** characters throughout excepting the syllables "*Śrī-Virūpāksha*" at the end which are in Kannaḍa. The inscription is in a good state of preservation: the only places where the letters appear slightly damaged are at the commencement of lines 20 and 68.

The language of the inscription is **Sanskrit** verse from beginning to end. The description of the boundaries in *dēśabhāshā*, promised by verse 46 (ll. 71, 72), is left blank for reasons which cannot be guessed at this distance of time.

As is usual in the copper-plate grants of Vijayanagara kings, this record contains evident mistakes of spelling such as the frequent substitution of *sa* for *śa* (ll. 1, 4) and *vice versâ* (ll. 1, 3); *tha* for *ta* (ll. 5, 16); *dha* for *tha* (l. 43); omission of *visarga* (ll. 5, 8, 13) and its retention in places where it has been changed into स (l. 42); unnecessary insertion of *anusvāra* (ll. 37 and 38), etc. Conjunct consonants are sometimes written side by side as in हृदयाशु (l. 2), पात्रयत्नव° (l. 37) and खड्गायत: (l. 33). In चतुर्षदि (l. 45) and भूट्टप (l. 12) the rules of *sandhi* have not been properly observed. न has been unnecessarily doubled in बिभ्रन्विरा° and *visarga* has been changed into double र in गुणरैमेश्री° (l. 27). Other instances of mistakes are सौच for सच (l. 45), सर्वं for सर्वे (l. 13) and येनैव for येनैव (l. 17). As all the mistakes occurring in the record have been corrected in the text or in the foot notes, they have not been given here in more detail.

The first three verses are invocations addressed to Śiva, Gaṇapati and the boar incarnation of Vishṇu. The fourth introduces the **Moon**, and the fifth refers to Yadu and **Vāsudēva**. The historical portion commences with **Saṅgama** (v. 6). His son was **Bukka**. When he became king, the prosperity of the **Karnāṭa** kingdom was permanently established (vv. 7 and 8). **Harihara (II)** was born to him; he filled the quarters with the wealth of his charity (v. 9). He had a son named **Pratāpa-Dēvarāya (I)** by whom the **Turushkas** and hostile kings were overcome (vv. 12 and 13). His queen was **Dēmāmbikā** and their son was **Vijayabhūpati**, renowned for his wisdom (v. 14). Vijayabhūpati's son by **Nārāyaṇidēvī** was **Pratāpa**, also called **Prauḍhapratāpa** (v. 15), who obtained from his elder brother the kingdom of **Ghanādri** (v. 16). His son by queen **Siddaladēvī** was **Virūpāksha**. The titles *Rājādhirāja* (v. 18), *Rājaparamēśvara* (l. 42), *Mūrurāyaragaṇḍa*, *Pararāya-bhayaṅkara* and *Hindurāya-Suratrāṇa* and *Chhurikā-bhālanētra* (v. 20) are given him. It is said that he obtained the kingdom by his own prowess and ascended the ancestral throne on the bank of the **Tuṅgabhadrā**, in the presence of god **Virūpāksha** (vv. 21 and 22).

In speaking of the ancestors of Virūpāksha, our record refers to the valour of Bukka I, the munificence of Harihara II, the prowess of Dēvarāya I and the wisdom of Vijayabhūpati. The same is pithily expressed in a single couplet elsewhere[1] thus:—

भटौ बुक्कमहीपालो दाने हरिहरेश्वरः ।
शौर्ये श्रीदेवराजेशो ज्ञाने विजयभूपतिः ॥

[1] *South-Ind. Inscr.*, Vol. I, p. 163, verse 15.

The statement that when Bukka I, one of the two earliest sovereigns of the Vijayanagara dynasty, ascended the throne, the prosperity of the Karnâṭa kingdom was well established, is of particular interest to the student of history, as it seems to hint the probable fact that the Vijayanagara dominion was founded on the ruins of the Hoysaḷa (*i.e.* the Karnâṭa) dominion, which was wrecked by the Muhammadan invasions of South India; and shows also that the inveterate feud between the Vijayanagara kings and the Muhammadan monarchs should have risen even from the very inception of the new Hindu kingdom. There is not much doubt that the country over which Bukka ruled was a portion of the Karnâṭa empire and that the Vijayanagara kings were the political successors of the Hoysaḷas.

Of greater importance are the statements of our plates that Pratâpa, also called Prauḍhapratâpa, was the younger son of Vijayabhûpati, that he obtained from his elder brother,—showing clearly that he held a subordinate position under him,[1]—the government of Ghanâdri, and that Virûpâksha II was his son.

The Satyamaṅgalam plates of Dêvarâya (II)[2] state that Vijayabhûpati had two sons of whom the elder was called Dêvarâya and the younger Pratâpa-Dêvarâya. From this it is clear that both the sons had in common the name Dêvarâya. The existence of these two sons of Vijayabhûpati, though not with their names specified, is recognised in the three copper-plate grants of Virûpâksha known to us so far, *viz.* the Sajjalûr plates,[3] the Śrîśailam plates[4] and the present Sômalâpuram grant. These, being directly concerned in tracing the main line of Virûpâksha, naturally enough, omit to mention the name of the elder. While the Śrîśailam plates call the younger Pratâpa-Râya, the other two give the additional information that he was renowned by his title *Prauḍhapratâpa*. Thus, from all these sources it can be gathered that while the first son of Vijayabhûpati was known by the mere name Dêvarâya—with or without the common addition of Vîrapratâpa which is generally assumed by Vijayanagara kings—the younger was always called Prauḍhapratâpa or Pratâpa-Dêvarâya which is sometimes supplemented in stone records by the epithet *gajavêṭṭai-kaṇḍaruḷiya*. Among the stone records of Vijayanagara kings, the following are clearly attributable to the second son of Vijayabhûpati :—

No. 92 of the Madras Epigraphical collection for 1918.	Dated in Śaka 1351 in the reign of Pratâpa-Dêvarâya, son of Vîra-Vijayarâya.
No. 91 of 1918	Dated in Śaka 1352 in the reign of Prauḍha[5]-Dêvarâya-Mahârâya, son of Vîra-Vijayarâya-Mahârâya.
No. 68 of 1918	Dated in Śaka 1367 in the reign of Pratâpa-Dêvarâya-Mahârâya, son of Vîra-Vijayarâya-Mahârâya.

Thus it is beyond doubt that the second son of Vijayarâya or Vijayabhûpati was not only called Pratâparâya and Prauḍhapratâpa, but had the additional name Dêvarâya suffixed to these names. Further, the Madras Museum plates of Dêvarâya II[6] refer to a younger brother of his named Śrîgiri who was governing Maratakanagara in A.D. 1424-5 and the Satyamaṅgalam plates of Dêvarâya II, dated in the same year, imply that his younger brother Pratâpa-Dêvarâya was

[1] If Mr. Rice has correctly read *nijâgrajâprâptam=anâdi-râjyam* (p. 186 of *Ep. Carn.*, Vol. III), it is evidently a mistake of the engraver for *nijâgrajât=prâpta-Ghanâdri-râjyaḥ* given in our plates. His remarks (*ibid.*, introduction, p. 23) that Pratâpa or Prauḍha-pratâpa obtained the immemorial kingdom from his elder sister requires modification.

[2] *Ep. Ind.*, Vol. III, p. 37 f.

[3] *Ep. Carn.*, Vol. III, pp. 185 ff., Ml. 121.

[4] *Ep. Ind.*, Vol. XV, pp. 8 ff.

[5] This is a shortened form of Prauḍhapratâpa.

[6] *Ep. Ind.*, Vol. VIII, pp. 306 ff.

ruling over the same district. There is thus no doubt that Pratâpa-Dêvarâya is identical with Śrîgiri and this fact has been pointed out by Mr. Venkayya in his *Annual Report* on Epigraphy for 1906 (p. 82). It may be added that the name Prauḍhapratâpa-Dêvarâya was already assumed by Dêvarâya I.[1] A stone inscription of this second son under the name Śrîgirinâtha-Uḍayâr, dated in Śaka 1348, has also been discovered.[2]

In the face of the inscriptional evidence furnished in a number of genuine copper-plate grants and stone records referred to above, we do not attach any value to conclusions differing from recorded facts as have been arrived at by the late Mr. T. A. Gopinatha Rao in editing the Śrîśailam plates, where he has vainly attempted to show that there was but one son of Vijayabhûpati, by name Dêvarâya. He has advanced no valid grounds for disproving the identity of Śrîgiri with Prauḍhapratâpa-Dêvarâya, the second son of Vijayabhûpati.

The first two sons of Vijayabhûpati being known by the name Dêvarâya, it is but natural to mistake the sons of one of the Dêvarayas for those of the other. But the fact mentioned in our inscription, *viz.* that Virûpâksha was the son of the second son of Vijayabhûpati, whom we have pointed out above to have borne the full name *gajavêṭṭai-kaṇḍaruḷiya* Prauḍhapratâpa Pratâpa Dêvarâya, is of importance as it conclusively controverts the commonly accepted view, *viz.* that Mallikârjuna and Virûpâksha were the sons of Dêvarâya II, the first son of Vijayabhûpati. In this connection, we may point out that two unpublished stone inscriptions furnish definite information. They come from Kundâṇi[3] in the Salem District and Conjeeveram[4] in the Chingleput District and state that Mallikârjuna and Virûpâksha were the sons of *Gajavêṭṭai-kaṇḍaruḷiya Prauḍha-pratâpa-Dêvarâya-Mahârâya.* Here the mention of the epithet Prauḍhapratâpa makes it certain that the king referred to is the younger son of Vijayabhûpati. Another stone inscription of Virûpâksha,[5] dated in the cyclic year Śârvari, calls him the son of Gajavêṭṭai-Pratâpa-Dêvarâya. It may be noted that while the mother of Virûpâksha was Śiddhaladêvî, the mother of Mallikârjuna was Ponnaladêvî, who must have been two different queens of *Prauḍhapratâpa*-Dêvarâya, the second son of Vijayabhûpati.

Our record is dated in Śaka 1389, expressed by the word *nav-âshṭa-guṇa-bhû*, Sarvajit, Kârttiga month, bright fortnight, Utthâna-dvâdaśi. According to Dewan Bahadur L. D. Swamikkannu Pillai's 'Ephemeris,' this date corresponds to Monday, 9th November, A.D. 1467. It may be noted that the stone inscriptions of this king range in date from Śaka 1387,[6] Vyaya to Śaka 1407[7] from which it would appear that he ruled for at least ten years. But the latter date is very doubtful as the record is damaged.

The generals and officers of this king made known to us from inscriptions are Viṭṭharasa, Oḍeya,[8] Sâḷuva-Tirumalarâya,[9] Sâḷuva-Narasiṁha,[10] and Siṅgappa-(or Śingaṇa-) Daṇḍanâyaka.[11] Of these, Viṭṭharasa-Oḍeya was in charge of Bârakûru and Mangalore which he was governing from Śaka 1387 to 1398. Tirumalarâya was in charge of Trichinopoly and Sâḷuva-Narasiṁha developed into a usurper in later years. Two stone records of Virûpâksha in particular are

[1] No. 138 of the Madras Epigraphical Collection for 1889.
[2] No. 63 of the same collection for 1908.
[3] No. 203 ditto 1911.
[4] No. 39 ditto 1890.
[5] No. 661 ditto 1904.
[6] Nos. 130 and 153 of 1901.
[7] No. 398 of 1909.
[8] Nos. 30 and 153 of the Madras Epigraphical Collection for 1901.
[9] *Kôyiloḷugu* makes mention of this chief—see *Ind. Ant.*, Vol. XL, p. 141.
[10] See note 6, below.
[11] Nos. 29 and 153 of the Madras Epigraphical Collection for 1901.

worth mentioning in this connection, of which the one, dated in Śaka 1390, registers a gift by an agent of Sāḷuva-Narasiṁha, and the other, dated in Śaka 1394, records a gift for the merit of the same chief.[1]

The subjoined inscription registers (i) a gift of land situated to the west of the Hagarī river within the boundary of the village of Yammegēnūru in Mūḍa-nāḍu, a sub-division of Hastināvati-vaḷita, to a Brāhmaṇa resident of Niṭṭura, the son of Sāraṅgārya, learned in the Vēdas, Sāṅkhya and Mīmāṁsā and reputed as the author of a work called *Bhāshya-Bhāshā*; (ii) gift of lands under the tanks called Kṛishṇa-taṭāka, Kariyakere and in the village of Chiṭukanāhāḷu to another Brahman named Virūpākshārya, a physician and the son of Rasōśvara; and (iii) gift of the village of Sōmalāpuram, with its name changed into Virūpākshapuram, to a certain Vīraṇārya, who, in turn, appears to have distributed it among Brahmans, dividing it into 60 *vṛittis*. The distribution of the full 60 *vṛittis* among Brahmans is not given. But it is said that four Brahmans and three others connected with the issue of the copper-plate grant received 8½ shares. The account for the rest is omitted, but it is evident from the blank space preceding verse 46 that possibly one or more plates containing the names of the rest of the *vṛitti* holders, which were intended to be inserted, have not been so done. The description of the boundary marks too, which must have followed this verse, is omitted, as already remarked.

Of the geographical names found in this inscription, Niṭṭura, Chiṭukanāhāḷu, and Sōmalāpura are villages situated in the Bellary taluka; Hastināvatī is another name for Ānegondi near Hampi; Yammegēnūru is in the Bellary taluka at the place where it borders on Hospet; and the river Hagarī bears the same name even now. It is noteworthy that the old name Sōmalāpura is retained at present while its later name Virūpākshapuram given in Śaka 1389 has not survived. *Khāri*, according to the dictionaries, is equal to 3 bushels and perhaps indicates the extent of land by its sowing capacity. The two tanks, Kṛishṇa-taṭāka and Kariyakere, must be looked for also in the Bellary taluka.

The composer of the grant was Durga-Bhaṭṭa, son of Mādhavārādhya, who figures also in Ml. 121; and the engraver was the goldsmith Vīraṇārya, son of Muddaṇārya.[2] This engraver is perhaps identical with Vīraṇārya, the father of Mallaṇa, who incised the inscription Ml. 121.

[The following metres are employed: vv. 1-3, 5, 7, 11, 14, 15, 17, 20-53, *Anushṭubh*; vv. 4, 10, *Śārdūlavikrīḍita*; vv. 8, 12, 13, 16, 19, *Upajāti*; vv. 6 and 18, *Upēndravajrā*; v. 9, *Mālinī*; and v. 54, *Śālinī*.]

TEXT.

First Plate.

1 श्रीगणाधिपतये नमः । नमस्तुं(स्तुं)गशि(शि)रश्चुंबिचंद्रचामरचारवे । त्रै-

2 लोक्यनगरारंभमूलस्तंभाय शंभवे ॥ [१*] रक्षायै जगतां भूयाद्दयाकुंभि-

3 रदाननः [।*] पाथक्रीडाविधौ यस्य पक्षवंति पयोधयः । [२*] [3]नमःश्च(स्त)स्मै(स्मै) वरा-

4 हाय यद्दंष्ट्राग्राकमूर्धनि । समस्तोपवतो पृथ्वी लीलाकल्लोरदृश्व(श्य)तः[4] । [३*]

[1] No. 79 of the Madras Epigraphical Collection for the year 1919 and No. 188 of the same collection for the year 1902.

[2] The Śrīśailam plates were also incised by the same person (see above, Vol. XV, p. 19) where the name of the person occurs as Vīraṇāchārya, son of Muddaṇāchārya.

[3] Cancel the *visarga*. [4] Omit the *visarga*, लीलाकमिवदृश्यते is the reading in Ml. 121.

5 [1]स्वस्ति(स्ति) श्रीकमलालयानुजतया दीव्यत्प्रभामंडलो नक्षत्राधिपति[:*] प्र-
6 भाभिरभिसं(शं) दि[शां]मण्डलोल्लासक[त्] [।*] क्षीराब्धिप्रभवः कलानिधिरि-
7 ति ख्यातस्तु(स्तु)षांशु(शु)[:*] स(स)यं ।[2] गोत्रे यस्य(स्य) त्रिभुवनभवनमध्यस्तंभोभवा-
8 नीपती[:*] ॥ [४*] वंशे(शे) तस्यैव संजातो यदुर्नाम महीपतिः [।*] यद्वंश(श)जेन भू-
9 [रि]षा वासुदेवेन पालिता । [५*] यस्मिन्संगरजिष्ण[3](त्य)भंगुरमद[4] प्रत्यर्थिपृथ्वी-
10 भुजां [5]सार्थौ(र्थं)र्थमसुपागतैरपि मता हित्वाश्रमो संभ्रमा[त्*] । नक्षोत्रिवि-
11 वरोषु[6] गच्छति पुरो दिङ्नाथवृंदेष्वहो स्वर्ग: प्रथितमौक्तिमण्डन-
12 मणि[:*] श्रो(सौ)भूत्त(नृ)प: सनम: ॥ [६*] ततोभूत्तत्कभूपालः सर्वभूप-
कुलाग्रणी[: ।*]
13 यत्प्रतापानले सर्व(र्वे) पतंगत्वरिभूभृत: ॥ [७*] कर्णाटलक्ष्मी[:*] सविलास[मा]-
14 स यस्मिन्नधिरोपे महनीयकोत्तो(र्ती) [।*] भूमिस्वशैबाप[7] वसुंधरात्वं स्थिरेति नाम
15 प्रथमं गुणोघै[8] ॥ [८*] उदयमुद[य*]शैलादुच्चदुद्दामतेजा[:*] मत(त्र)धर
इव नु(सु)क्ष्मा-
16 [9]भृत:सुंगमौलि । हरिहरनरपाल: प्रापदास[ा](शा)[:*] समस्ता(स्ता:) नरहत-
वसुपूरे[:*]
17 पूरयन् पूर्णधामा ॥ [९*] येनाकारि कलौ(लि:) कृताधिकतरो येनै(नै)व
[यं]द्वापत(र): क-
18 लेन्नं(न्न)मपयोजनो(नि)[10] प्रस(स्व)मिताशेषोयसर्ग: परा(रं) [।*] येनांभोनिधि-
मेखला वसु-
19 म[तो ध]र्मेण संरक्ष(क्ष्य)ते तस्यामैकादिगोस(श)पालि[त][11]यशोविंबस्य कोणो-[12]
20 पम(मा) ॥ [१०*] [मे]कादेवीति विख्याता श्रीपार्वत्योस्तु मेऽकना[त्*।]
सासौञ्जाया[13] महीभर्तु[:*]

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[1] Ml. 121 has स्वस्ति.

[2] Delete the punctuation.

[3] जिष्ण is also the reading in the Kannada text of Ml. 121 (see p. 203 of *Ep. Carn.*, Vol. III); but it is read as जित्य in the romanised text given on p. 135. Read यस्मिन् संगर°

[4] Read °मदे:.

[5] संवे° is the variant given in Ml 121.

[6] Read वरेषु.

[7] °श्वया° is the reading in Ml. 121.

[8] गु is a correction from घु; read गुणौघै:.

[9] Read भतसुकमौलि·.

[10] Ml. reads पयोजनी.

[11] य is a correction from थ.

[12] The Kannada text of Ml. 121 has हेमोपमा (p. 203 of *Ep. Carn.*, III) and the romanised text has *naiv̄opama* *ibid.*, p. 135).

[13] Another variant of this is चासीज्जाया which is found in Ml. 121.

21 स[र्व्वार्थी][1] पुत्रकलत्रवर्गा ॥ [११*] इंद्रः स्वकीयं परिरक्षितुंकामो भूमावधीत्ता(त्य) प्र-
22 तिपन्न[रूपः] [।] प्रतापपूर्व्व[:*] किल देवरायः प्रतापतो भूमिमपालय-
23 [त्सः ।] [१*] प्रतापवर्म्मो[2] परिक्रममाणि पुण्यान्यनुष्ठा अपि यस्य
राज्ञः [।*] रि-

Second Plate; First Side.

24 पुश्चितीश[ा*]श्च निरस्तधैर्याः [3]कातारवल्मीकलतात्मरक्षाः ॥[१३*] तस्य देमांबि-
25 काभर्त्तुः पुत्रः शत्रुप्रमर्द्दनः [।*] विद्यानिधिर्व्विशेषज्ञो वीरो विजयभूपतिः [॥ १४*]
26 तस्य नारायणीदेव्या[4] प्रादुरासीद्यशोधनः । प्रौढप्रतापविभवः प्रता-
27 पाढ्यो महीपतिः ।[१५*] गुणैर(र)नेकै वनीतकेस्मिन्[5]न्विराजमानस्तु-
28 ङ्गतामकीर्त्ति[: *।] निजाग्रजात्[6] प्राप्तघनाद्रिराज्यः स्वार्य्यार्जितार्थिव्र-
29 जपारिजातः ॥ [१६*] तस्य [7]शिङ्गलदेवीति भार्या सर्व्वगुणाश्रया ॥
30 लक्ष्मीना(र्ना)र[ा*]यणस्ये(स्ये)व स(श)[ची]व[8] नमुचिद्विषः ॥ [१७*] तस्यां
सि(मि)वः प्रादुरभू-
31 द्गुणाढ्यो नाम्ना विरूपाक्ष इति प्रसिद्धः [।*] राजाधिराजः क्षितिपा-
32 लमौलि[र्व्वि]द्याघमूर्त्ति(र्त्ति): कारुणीकसिंधुः ॥[१८*] निजप्रतापा[द]धि[ग]-
33 त्य राज्यं समस्तसाम्वै[:*] परिसेव्यमानः [।*] खड्गा(ग्रा)यतः[9] सर्व्वरिपून्वि-
34 जित्य स मोदते वीरविलासभूमिः ॥ [१९*] पु(धु)रिकाभालनेत्री(त्रे)ति वि-
35 ख्यातः प्रतिपं(प)क्षधीः । मूरुरायरगंडांकः परिरायभं(भ)यंकरः [।*]
36 हिंदुरायसुरत्राण इत्यादि बिरु[दो]ज्ज्वलः ॥ [२०*] तुंगभद्रानदीती-
37 रे ।[10] विरूपाक्षस्य संनिधौ [।*] पित्र्य[11] सिंहासनं प्राप्य पालयन्न(न्न)-
वनीमिमां [॥ २१*] पुं(पु)-
38 ण्यश्लोकाग्रगं(ग)ण्योसौ विरूपाक्षक्षितीश्व(श्व)रः । धर्म्मस्थानगते[:]
39 सद्भिः संस्तुतो[12] धरणीसुरैः[13] ॥[२२*] शालिवाहननिर्णीतशकव-
40 र्षेष्वागते । न[वाष्ट]गुणभूयुक्ते सर्व्वजिद्वत्सरे शुभे [॥ २३*] मासि कार्त्तिक-

[1] Perhaps the correct reading is सर्व्वधा or सर्व्वार्थी; Ml. 121 has धनार्थी.

[2] Ml. 121 has वर्म्मी; read प्रतापवर्म्मी.

[3] Read कांतार°.

[4] Read ईव्या°.

[5] Cancel न्.

[6] See note 3, p. 4, above.

[7] Ml. 121 has शिङ्गलदेवी.

[8] सची नमुचिविद्विष: is the reading in Ml. 121.

[9] The variant found in Ml. 121 is संग्रामतः.

[10] Cancel the *daṇḍa*.

[11] दिव्यं is the reading that occurs in Ml. 121.

[12] संस्तुतो is another variant found in Ml. 121.

[13] The Kannada text of Ml. 121 has धरणीश्वरैः, but the romanised text reads correctly सुरैः.

41 विख्याते सिते पञ्च[चे] विशेषतः । उत्ताना(न)द्वादशी(शी)पुण्यं(ण्य)काले चापि नृपो-

42 त्तमः [।] [२४*] राजाधिराजः[1]स्तोजस्तो यो राजपरमेश्वरः [।] [वि]रूपाक्ष-क्षितीशो-

43 ध(थ) धर्मबुद्धा युतः सुधीः ।[२५*] आत्रेयाय [2]वगस्थैवे निद्दुरखलवासि-

44 ने । सां(सा)रंगार्यसुतायाथ सर्वशास्त्रविदे तथा । [२६*] भाष्यभूषाक[रा]-

45 याथ सांख्यामीमांसवेदिने । [3]सौवशास्त्रप्रवाणोय चतुष(ष्ष)ष्टिकाळा(ला)-

46 नि(वि)दे ।[२७*] षडंगसहितं वेदं वेदार्थं वेत्ति भूसुरः [।*] तस्मै द्विजाय भू-

47 [पालो] हस्तिनावतिवळितगं(गां) ।[२८*] मूडनाडस्थितं(तां) चैव नगरे[:*] प[श्चि]-

Second Plate; Second Side.

48 मे स्थितं(तां) । यंमेगेनूरु सोंऽन्येश ।[4] ख्यातो भूमिं महीपति[: ॥*] [२९*] प्रादात्तथा च स(म)स्त-

49 तं चेत्रं सस्यफलप्रदं ॥[२९½*] भारद्वाजाय विदुषे ।[4] रवेश्वरसु-

50 ताय च । विरूपाचार्यभिषजे [5]वन्नशाखां(खा)ध्या[यि]-

51 ने तथा ॥[३०*] खारिसप्तप्रमाणं च [त]टाके कणसंज्ञिते[।*] कारियकेरे[6]र्ये-

52 ति विख्याते खारित्रयमितां भुवं ।[३१*] चिटुकनाहाकु नाम्न्येव खारित्रयमितां

53 भू(भु)वं । मिळित्वा खारिसंख्यां(ख्या)च त्रयोदश सुविश्रुता ॥[३२*] च(त)त्रस्थं ग्राममेकं तु सो-

54 मलापुरनामकं [।*] अस्माकं भो विरूपाक्षमहीनाथ ददस्व नः[7] । [३३*] इ[ति]

55 विज्ञाप्य भूभर्तुर्विरूपा[क्ष]महीपते[: ।*] वि(वो)रपार्यं[:*] स्वयं लब्धा(ब्ध्वा) ग्रामं[8] चा[च]

56 महीश्व(श्व)रात् ॥[३४*] शृ(श्रु)त्वा विज्ञापनं तस्य विरूपाक्षमहीपति[:*] । [३५*] निधिनिक्षे-

[1] Delete the *visarga*.

[2] Read च°.

[3] Read सर्वशास्त्रप्रवीणाय.

[4] Cancel the *daṇḍa*.

[5] Read च.

[6] The *ē* of रे seems to have been erased in the original.

[7] Either the word अस्माकं or नः should be cancelled; otherwise there would be redundancy.

[8] We should have expected वीरपार्यश्च लब्धवान् ग्रामग्राम:. For the pleonastic use of the words महीपतिः and महीश्वरात् see above, note 1.

57 पसंयुक्तं जलपाषाणमिश्रितं । अक्षिण्यागामिसंयुक्तं ।[1] निक्षेपाक्षयस-

58 मन्वितं ।[३६*] अष्टभोगैश्च संयुक्तं कुल्यारामसमन्वितं [।*] समस्तवस्तिसंयु-

59 क्तं सर्वमान्यं फलप्र[दं] । [३७*] तुंगभद्रानदीतीरे विरूपाक्षस्य सं(स)न्निधौ[।*]

60 सहिरं(र)ण्योदक(कं) दानधारापूर्वं यथाविधि [॥३८*] विरूपाक्षपुरं चेति-

61 प्रतिनाम विधाय च ॥ भोक्तुं दातुं द्विजेभ्यश्च प्रादादा[चं[2]द्र]तारकं । [३९*]

62 सोपि द्विजश्च संतुष्ट[:*] संयुतः परया मुदा [।*] अकरं(रो)दाशिषं राज्ञे चिरं-

63 जीवी भवत्विति ॥[४०*] गोत्रं शाखा पितुर्नाम द्विजानां च यथाक्रमं [।*] लिख्यं-

64 ते वृत्तिसंख्याश्च वृत्तिसंख्या यथाक्रमात् [॥ ४१*] श्रीवत्सो [3]यगधीतश्च [हेम]-

65 चार्यसुतः सू(सु)धीः [।*] मल्लिभट्टेति विख्यो(ख्या)तो वृत्तिमेकामिहाश्रुते ॥ [४२*] वासि-

66 ष्टो(ष्ठो) यगधीतश्च[4] यज्ञभट्टसु[तः] सुधी[:*] । [दु]र्गाभट्टेति[5] विख्यातो वृत्तिमे[का]मिहाश्नु-

67 ते ॥[४३*] हारीतो [6]यगधीतश्च चंपणार्य[सु]तः सुधी[:] [।*] [सारंगार्यश्च वि]ख्यात[:*] सार्धं[मेक]-

68 . .[स]: [॥ ४४*] आत्रेयोथ यगध्येत भायणा[र्य]स्य [नंदन]: [।*] भायिभट्टो द्विजश्रेष्टो(ष्ठो) वृत्ति-

69 [द्वयमि]हाश्नुते ॥[४५*]

Third Plate.[8]

70 [9]तेसते[स](स्त)मन्वितचिन्हे[10]दिं-

71 षु शास्या(खा)दिषु क्रमात् [।*] सोमागोप्ता(त्रा)ग्रहारस्य लिख्यंते देष(श)भाषया [॥४६*]

72 वासिष्टो(ष्ठो) बं(ब)व्ह(ह्वृ)चो विद्वान्

73 ऐतयार्यसुतः सुधीः [।*] वल्लभो रायसम्मा(स्वा)मि(मी) वृत्ति[11]मेकामिहाश्नुते ॥ [४७*]

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[1] Cancel the *daṇḍa*.

[2] चं is a correction from तु.

[3—4] Read यजुर्धीतश्च.

[5] Read °भट्ट इति.

[6] Read यजुर्धीतश्च.

[7] Read यजुर्ध्येता.

[8] At the top of this plate, a little below the right side of the ring-hole, is the letter *ri* which I am not able to explain.

[9] The line begins about the middle of the plate.

[10] Like ब्रह्मो in line 23 न्हे is written with *n* preceding *ha*. The grammatically correct form would be *vice versâ*.

[11] The two syllables मेका are written over an erasure.

74 त्वष्टा योमुद्रयाचार्यसूनुः मायणसि[द्ध]मः [।*] वीरया हयुषो धीमा[न्]

75 हस्तिमेधामिवाप्नुते ॥[४८*] आत्रेयो याजुषो धीमान्आधा(ध)याराध्यनंद-

76 नः [।*] [1]मायणः[1] पंचमहिषान् दुग्गा(र्गा)भट्टोत्र हस्तिभाक् ॥[४९*]
दानपाल[नयो]-

77 र्मध्ये दानाच्छे(च्छ्रे)योनुपालनं [।*] दानात्स्व(र्ग)मवाप्नोति पालनादच्यु(च्यु)तं

78 पदं ॥[५०*] स्वदत्ताद्वि(द्वि)गुणं पुं(पु)ण्यं परदत्तानुपालनं [।*]परदत्ताप[हारे]-

79 ण स्वदत्तं निष्फलं भवेत् ॥[५१*] स्वदत्ता(त्तां) [2]परदत्तां वा यो हर(रे)त
वसुं-

80 धरां । षष्टिर्व[र्ष]³सहस्राणि विष्टायां जायते क्रि(कृ)मि[:*] ॥ [५२*]
एकैव भगि-

81 नी लोके सर्वेषामिव भूभुजां [।*] न भोज्या न क(क)रग्राह्या(ह्या)
विप्रदत्ता [वसुं]-

82 धरा ॥ [५३*] सामान्योयं धर्मसेतु[4]नृपाणां काले काले पाल[नीयो]
भवद्भि[:] [।*]

83 सर्वानि[ता]न् भाविनः पार्थिवेंद्रान् भूयो भूयो याचते राम[चंद्रः] ॥[५४*] श्री[॥*]

84 Śrī-Virūpāksha.[5]

TRANSLATION.

(Line 1.) Obeisance to Gaṇādhipati.

(V. 1.) Invocation to Śiva [by the common verse *namas=tuṅga*, etc.].

(V. 2.) May the merciful elephant-faced (god), in the course of whose water-sport the oceans become (mere) ponds, protect the worlds.

(V. 3.) Salutation to that boar, at the tip of whose stalk-like snout, the earth, comprising the seven islands, seemed (*to possess the beauty of*) a lovely lotus.

(V. 4.) There is the Lord of stars (*i.e.* Moon), the younger brother of her who resides in the lotus (*i.e.* Lakshmī), who shines in the region of the firmament with his (lustrous) ray and constantly illuminates the quarters, who is born of the milk-ocean and is renowned as the depository of *kalas* (digits), himself being made of nectar rays and who has obtained the position of a jewel in the head of Śambhu, the consort of Bhavānī (*i.e.* Pārvatī).

(V. 5.) In his family was born the king named Yadu; and this world was protected by Vāsudēva who was born in that family.

(V. 6.) There was king Saṅgama of good conduct, wearing Śaśimauli (Śiva) as an ornamental jewel; on whose victory in battles, the crowds of enemy kings heavily burdened (with numbers) though vanquished reach the cardinal points in great haste; (but) whose (*i.e.*, the King's) fame moves further on (passing) through intervening spaces amidst lords of the (eight) directions.

[1] Cancel the *visarga* after न.

[2] The rest of this line and the next line up to कृमिः are written on an erasure.

[3] Read °वर्ष°.

[4] Read °सेतुर्नृपा°.

[5] In Kannada characters.

(Vv. 7 and 8.) Then came king Bukka, the foremost of the kingly race, in the fire of whose valour the hostile rulers were consumed as moths. In this king of great fame, the goddess of prosperity of the Karnâṭa (kingdom) rested with pleasure. And the goddess of the earth also for the first time realised the (significance of her) names *Vasundharā* and *Sthirā* on account of her qualities of bearing wealth and remaining permanent.

(V. 9.) Like the moon of bright lustre rising from the Udaiya-Śaila of lofty peak, king Harihara of rising full glory took his birth from king Bukka who wore a splendid crown and filled all the quarters with abundant wealth acquired by taxation as the moon with the exuberent lustre of his rays.

(V. 10.) What could stand comparison with him the reflection of whose fame is protected by the deities of the quarters, by whom the (stern) Kali age has been turned into one better than the (golden) Kṛita age; by whom was caused the highway of the school of philosophy which considers Duty (*Karma*) as god (Brahmā) free of all obstacles, and by whom the earth, having for (its) girdle the oceans, was ruled with justice.

(V. 11.) She, who was called Mēḷādēvi because she was a combination of Śrī (*i. e.* Lakshmī) and Pârvatī and was in every way possessed of auspicious marks, was the consort of this king.

(Vv. 12 and 13.) Indra, desirous of removing his stains, obtained on earth the form of this (king) and in the name of Dēvarāya, with Pratâpa prefixed to it, ruled the world with his prowess. In the glowing fire of this king's valour, the Turushkas were scorched up and (other) hostile monarchs, with (their) bravery lost, sought self-protection in forests and ant-hills.

(V. 14.) The son of this husband of Dēmâmbikâ was Vijayabhûpati, the destroyer of his enemies, the store-house of learning, of supreme knowledge and a hero.

(Vv. 15 and 16.) To him, through Nârâyaṇīdēvī, was born the king called Pratâpa, renowned as Prauḍhapratâpa, who had fame for wealth. He shone on this earth with many virtues, obtained fame by meritorious deeds, got the (*kingdom*) of Ghanâdri-râjya from his (uterine) elder brother and was a Pârijâta in granting their desired objects to crowds of mendicants.

(V. 17.) His wife was Śiddaladēvī, the resort of all good qualities, like Lakshmī to Nârâyaṇa and Śachī to the enemy of Namuchi (*i.e.* Indra).

(V. 18.) Śiva (himself) was born of her under the well-known name of Virûpâksha, full of good qualities, a *rājādhirāja*, the head-ornament of kings, a munificent person and the one ocean of mercy.

(V. 19.) Acquiring the kingdom through his own prowess, attended with all kinds of prosperity, and conquering all his enemies with the point of his sword, he, as the play-ground of heroism, rejoices.

(V. 20.) He who is renowned as *Chhurikā-Bhālanētra* (*i.e.* Śiva in wielding the sword) and ripe of wisdom holds the high (sounding) titles, such as *Mūrurāyaragaṇḍa*, *Pararāya-bhayaṅkara* and *Hindurāyasuratrāṇa*.

(Vv. 21 to 29.) On the bank of the Tuṅgabhadrā river (and) in the presence of (the god) Virûpâksha, having obtained his ancestral throne, this king Virûpâksha, the foremost (among those) possessing noble virtues, rules the earth, surrounded by pious Brâhmaṇas assembled in his court. In the course of the Śaka years determined by the Śâlivâhana-[Era], in the excellent year Sarvajit (corresponding to the year) expressed by *nine*, *eight*, *guṇas* (three) and *bhū* (one) (*i.e.* 1389), on the auspicious occasion of *Utthānadvādaśī*, in the bright half of the month of Kârttika, he, the best of kings, the wise Virûpâksha, a *rājādhirāja* (and) *rājaparamēśvara*, of great valour, with the intention of making charity, made a grant to a Brâhmaṇa resident of Niṭṭura, who was the son of Sâraṅgârya, who belonged to the Âtrēya-[*gōtra*], and was a student of the Ṛik-[*Śākhā*], who was well versed in all the *Śāstras*, who knew the sixty-four arts

as well as the Sâṅkhya and the Mîmâmsâ (systems of philosophy), who was learned in the Vēdas and the six *aṅgas* (branches) with their meaning, and who was the author of the *Bhāshya-Bhāshā*, of (one) *khāri* of land situated to the west of the Hagarî (river), within the boundary of (the village of) Yammegēnūru in Mūḍa-nāḍa and in (the sub-division of) Hastinâvatî-vaḷita.

(Vv. 30 to 32.) Again he gave to the scholar and physician Virūpâkshârya, son of Rassēśvara of the Bhâradvâja-[*gōtra*] and a student of the Ṛik-*Śākhā*, 7 *khāri* of valuable land yielding grain and fruit under the tank called Kṛishṇa, 3 *khāri* of land under (the tank) known as Kariyakōre and of 3 *khāri* of land in (the village) called Chiṭukanâhāḷu—thus in all, the number of 13 *khāris*.

(Vv. 33 to 39.) Having petitioned thus to king Virūpâksha "Oh! King Virūpâksha! grant me the village situated there named Sōmalâpura", Vîraṇârya obtained from the king the (said) village. On hearing the request, king Virūpâksha made, in the presence of the god Virūpâksha on the bank of the river Tuṅgabhadrâ, a *sarvamānya* gift with gold and water, accompanied by libation of water as laid down by rule, of the fertile village (Sōmalâpuram) with all its royal revenue[1], together with canals and gardens, with its name changed into Virūpâkshapuram,—for being enjoyed as long as the Moon and the Sun endure, or for being given away to Brâhmaṇas,—together with the eight kinds of enjoyment, *i.e.* (the right to own) the *nidhi*, *nikshēpa*, *jala*, *pāshāṇa*, *akshiṇī*, *āgāmi*, *siddha*, and *sādhya*.

(V. 40.) The Brahman too, pleased and overpowered with joy, blessed the king with long life.

(V. 41.) (Here) will be written, in order, the *gōtra*, *śākhā* and the father's name and the names of the Brahmans. The number of *vṛittis* (who received shares in the village) is sixty.

(Vv. 42 to 45 contain the names of four of these donees.)

Verse.	Name of the donee.	Father's name.	Gōtra.	Śâkhâ.	Number of *vṛittis* owned.
42	Malli-Bhaṭṭa . . .	Hēmaṇârya . . .	Śrîvatsa . . .	Ṛik .	1
43	Durgâ-Bhaṭṭa . . .	Vallaṁ-Bhaṭṭa . .	Vâsishṭha . .	Do. .	1
44	Sâraṅgârya	Haṁpaṇârya . .	Hârîta . . .	Do. .	1½
45	Bhâyi-Bhaṭṭa . . .	Bhâyaṇârya . . .	Âtrēya . . .	Do. .	2

(V. 46.) The boundaries of this Brahman village (*agrahāra*) with their respective marks are written (below) in the language of the country, in the four directions commencing with the east, in order.

(V. 47.) The wise and learned Vallabha, son of Aitayârya, and the chief of the Secretaries (*Rāyasa*) belonging to the Vâsishṭha-[*gōtra*] and the Bahvṛicha-[*Śākhā*], holds one *vṛitti* (in this village).

(V. 48.) The intelligent smith Vîraṇa of virtuous qualities, (who was) the engraver of this document and the son of the prosperous Muddaṇâchârya, holds one *vṛitti* (in this village).

(V. 49.) The learned and intelligent Durgâ-Bhaṭṭa of the Âtrēya-[*gōtra*] and the Yajus-[*Śākhā*], the composer of this document and the son of Mâdhavârâdhya, owns one *vṛitti* (in this village).

(Vv. 50 to 54.) [Five of the usual imprecatory verses.]

(Line 84.) *Śrī-Virūpāksha.*

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[1] The word वृत्ति has perhaps to be corrected into वृत्ति

No. 15.—THE BRAHMA-SIDDHĀNTA OF BRAHMAGUPTA, A.D. 628:

MEAN SYSTEM.

BY ROBERT SEWELL (I.C.S., RETIRED).

(Continued from Vol. XVII, p. 187.)

321. The Tables published in my last article (*above, Vol. XVII*) enabled the dates of ancient Indian inscriptions and records to be verified according to the requirements of the *Brahma-Siddhānta* with, as basis of calculation, the "true" or apparent motions of sun and moon. This mode of reckoning appears to have been introduced in the 11th century A.D. But the *Brahma-Siddhānta* was composed in A.D. 628 and for at least four centuries after its appearance details for the Calendar were almost certainly based on mean planetary motions; while it is believed that this mean system continued to guide the preparation of *pañchāngas* (almanacs) till a much later date—perhaps for several centuries in some parts of the country.

For the correct verification, therefore, of early dates it is necessary for historians to be provided with a set of Tables based on mean planetary motions and the postulates of the *Brahma-Siddhānta* in addition to those based on mean motions and the postulates of the *Ārya-Siddhānta*. The latter were provided in a previous article in this volume. The former are presented herewith. They cover a period of 800 years, from K.Y. 3700 to 4500, or from A.D. 599 to 1400.

The system of work is the same as in all my previous Tables, that is to say, it is the system of Largeteau as adopted by Professor H. Jacobi in the *Indian Antiquary*, Vol. VIII, and in the *Epigraphia Indica*, Vol. XI. Full examples shewing the method of work, which is very simple, are given in my former articles; others, specially concerning the system of mean reckoning on *Brahma-Siddhānta* principles, are given below.

In case of doubt as to which of the Tables already published should be used in the present case attention is directed to the accompanying § 329.

322. In examining the dates of records in earlier years it is necessary to remember that the modes of reckoning adopted were not always the same as those used in more recent years. As to eras, reference to articles 6-12 of my former work, *Indian Chronography*, is recommended. For other matters the late Dr. J. F. Fleet's remarks in the *Journal of the Royal Asiatic Society* for 1912, pp. 704-5, will be found very valuable.

Especially let it be borne in mind that the lunar month reckoning in early years was probably carried out on the *pūrṇimānta* system. According to the late Professor Kielhorn the earliest known date certainly in *amānta* reckoning belonged to the year A.D. 794. It is contained in the Paiṭhān plates of the Rāshṭrakūṭa king Gōvinda III (*Epig. Ind.*, III, 105; *Ind. Ant.*, XVII, p. 142, No. 9). As regards these two systems, the *amānta* and *pūrṇimānta* names of lunar months, see *Indian Calendar*, §§ 13, 45 (with Table on p. 26), 47. 51. and the late Saṅkara Balkrishna Dikshit's footnote on p. 31; also *Indian Chronography*, §§ 75, 76, p. 31.

Elements of the Brahma-Siddhānta mean reckoning.

323. The principal elements are fully stated in my former article on this authority (*above*, Vol. XVII, § 313). For calculation on the mean system the following notes are necessary.

(i) The length of the mean sidereal solar year is $365^d\ 6^h\ 12^m\ 9^s$, a fixture afterwards adopted by Bhāskarāchārya in his *Siddhānta-Śirōmaṇi*, A.D. 1150.

(ii) The advance of *a* (distance of mean moon from mean sun)—which finally fixes the index of the *tithi* ($\frac{1}{30}$th of a mean lunation) in measurement by 10,000ths of circle—in every civil day of 24 hours and in hours, minutes and seconds, has already been given for the *Siddhānta-Śirōmaṇi* in Tables LIV, A and B (*above*, Vol. XV). These Tables are applicable to the *Brahma-Siddhānta*.

(iii) For the sun's mean motion per day, hour, minute, etc., see Tables XLIII and XLIV (*above* Vol. XIV).

(iv) The advance of *a* in one mean solar month is, in 10,000ths of circle, 307·349156595.

(v) Each solar month consists of $30^d\ 10^h\ 31^m\ 0^s{\cdot}75$. Table XCI below shews the interval of days, hours, etc., between the moment of mean Mēsha-*saṁkrānti*, when the mean sun is at celestial long. 0° (*Table XC, cols. 13-17*), and the moment of each subsequent *saṁkrānti* when the mean sun enters each of the twelve signs; and so enables the day and time when each mean solar month begins to be ascertained. The same Table gives the advance of *a* from its value at the moment of mean Mēsha-*saṁkrānti* to the same at each subsequent *saṁkrānti*.

(vi) The interval between the moments of true and mean Mēsha-*saṁkrānti*, i.e. between the moments of the astronomical beginning respectively of the true and mean solar year, which interval we call the *śōdhya*, varies slightly year by year in consequence of the postulated shift of the sun's apsis (§ 313, VII, *above*). The exact intervals, century by century from K.Y. 3700 to 4800, were given above in § 315. The Table is here repeated and extended so as to embrace the whole period of the general Table XC below. The quantities were computed by Dr. Robert Schram.

TABLE B.

(*above*, p. 126.)

VALUE OF *śōdhya* BY THE *Brahma-Siddhānta*.

Kaliyuga.	A.D.	ŚŌDHYA AT BEGINNING OF CENTURIES.				
		D.	H.	M.	S.	Days and decimals.
3700	599-600	2	4	8	59·8128	2·1729145
3800	699-700	2	4	9	2·0160	2·1729400
3900	799-800	2	4	9	4·2192	2·1729655
4000	899-900	2	4	9	6·4224	2·1729910
4100	999-1000	2	4	9	8·6256	2·1730165
4200	1099-1100	2	4	9	10·8288	2·1730420
4300	1199-1200	2	4	9	13·0320	2·1730675
4400	1299-1300	2	4	9	15·2352	2·1730930
4500	1399-1400	2	4	9	17·4384	2·1731185

The moment of mean Mēsha-saṁkrānti, or the beginning of the mean solar year.

324. The general Table which follows (Table XC, *cols. 13-17*) states the moment of beginning of each mean solar year according to the *Brahma-Siddhānta*. The first entry is for the expired year 3700 of the Kaliyuga (A.D. 599-600), in which year the astronomical beginning is fixed as at 5^h 15^m after mean sunrise on Saturday, 21 March, A.D. 599. It is incumbent on me to prove the correctness of this fixture. Subsequent entries are based on it by the addition to it year by year of 365^d 6^h 12^m 9^s. Proof may be offered in three ways:—(A) by comparison with the date and time already found for the beginning of the true solar year K.Y. 3700, utilizing Dr. Schram's determination of the interval between the two occurrences; (B) by comparison with the date and time fixed for the beginning of the same mean solar year according to the *First Ārya-Siddhānta*, allowing for the time-difference between the two authorities caused by their different estimate as to the length of the mean solar year, viz. 21^s; (C) by direct computation from the moment in K. Y. 0 of mean Mēsha-*saṁkrānti*, 3,700 years earlier, which, according to the *Brahma-Siddhānta* (§ 313, v, above), was exactly at mean sunrise, or 0^h 0^m 0^s Laṅkā time, on Friday, 18 Febr. (B.C. 3102).

A

			h.	m.	s.
Moment of true Mēsha-*saṁkrānti* in K. Y. 3700 (A.D. 599) (*Table LXXXII, Vol. XVII, above*).	(5) Thur.,	19 Mar.	1	6	0·1872
Śōdhya as above (§ 323, Table) . .	+ (2)	2	4	8	59·8128
Moment of mean Mēsha-*saṁkrānti* .	(0) Sat.,	21 Mar.	5	15	0

B

[See *Indian Calendar*, Table I, cols. 13-17, for A.D. 599-600.]

			h.	m.	s.
True Mēsha-*saṁkrānti* by *Ārya-Siddhānta*	(5) Thur.,	19 Mar.	23	17	30
Ārya-Siddhānta śōdhya	+ (2)	2	3	32	30
Mean Mēsha-*saṁkrānti* by *Ārya-Siddhānta*	(1) Sun.,	22 Mar.	2	50	0
Less Time-difference in 3,700 years[1] .			−21	35	0
Mean Mēsha-*saṁkrānti* by *Brahma-Siddhānta*	(0) Sat.,	21 Mar.	5	15	0

C

The epoch of the Kaliyuga was 0^h 0^m 0^s Laṅkā time, or exactly at mean sunrise on Friday. The length of the mean solar year being 365^d 6^h 12^m 9^s, the beginning of the next mean solar year took place 6^h 12^m 9^s after mean sunrise; and after the expiration of a century from the epoch the mean solar year began at 20^h 15^m 0^s after mean sunrise; so that after 37 centuries had passed the mean solar year K.Y. 3700 began at 5^h 15^m 0^s after mean sunrise.

When this latter calculation is carried out century by century, the figures shew that centuries 6, 12, 19, 25 and 32, five in all, were defective centuries consisting each of 36,525 days, the remainder being common centuries of 36,526 days. Since 36,526 divided by 7 leaves no

[1] See Table, § 278, in Article on the *Siddhānta-Śirōmaṇi* (*Vol. XV above*), which is equally applicable to the *Brahma-Siddhānta*; or refer to *Indian Chronography*, p. 61. The time-difference in 3,000 years is 17^h 30^m, in 700 years 4^h 5^m, total 21^h 35^m.

remainder and 36,525 divided by 7 leaves remainder 6, the results shew that whereas century 0 began on a Friday, century 37 began on a Saturday.

Table XC therefore, as regards the moment of mean Mêsha-*saṁkrānti* in K.Y. 3700 expired, A.D. 599-600, is proved to be correct.

The beginning of the mean luni-solar year, i.e. the civil day on which the tithi Chaitra śukla 1 expired; and the value of a *(mean tithi-index) at mean sunrise of that day. Amānta system.*

325. In § 317 of my article on the *Brahma-Siddhānta* as calculated by the true motions of the sun and moon (*above*, Vol. XVII) it will be seen that the value of *a* at mean sunrise of Sunday, 22 March, A.D. 599 (K.Y. 3700) was proved to be, in measurement by 10,000ths of a circle, 6567·108945284. The mean solar century, however, began on the previous day, Saturday, 21 March. Deducting one day's value of *a*, viz. 338·631985412, from the above, we find that at mean sunrise of that Saturday the value of *a*, or the mean moon's distance from mean sun, was 6228·476959872. This was its value at the beginning of the 37th century K.Y. Hence the first entry in Table XCII below which gives the values at mean sunrise on the day on which each century began. The remaining figures in that Table were obtained by the addition to this value of the increase of *a* in a century. [See § 316 of the same article. The increase of *a* in a century of 36,525 days is 997·678896964, and in a common century of 36,526 days is 0·416684507.] Centuries 38 and 44 were defective centuries; the rest were common ones. For the beginnings of the odd years of centuries Table LXXXVII was used, the value of *a* there given being added to that for the century.

Thus was determined the value of *a* at mean sunrise of the day on which each mean *solar* year begins (*see Example 1 below*). From this is found the value of *a* at mean sunrise of the day on which the *luni-solar* year begins.

326. The first day of the luni-solar year is, according to the general rule, the civil day on which expired the first *tithi* of the bright half (*śukla*) of the *amānta* lunar month Chaitra, i.e. the *tithi* which begins at the moment of the first new moon after the Mīna-*saṁkrānti*, or at the moment of the new moon when that *amānta* lunar month begins within the limits of which the Mêsha-*saṁkrānti* occurs. Having already established the value of *a* on the day in any year on which mean Mêsha-*saṁkrānti* occurred, we have to subtract from that value the increase of *a* in whole days between the two dates, the day on which the luni-solar year began being the earlier. The first 30 days' entries in Table LIVA (*above, Vol. XV*) enable this to be done. We select in that Table the *a* in col. 3 the value of which is next lower than the *a* of mean Mêsha-*saṁkrānti*, and the Table then shews in col. 1 the number of intervening days, and therefrom the European day and month, and, by subtraction, also (col. 2), the week-day. Deducting the selected *a* from the *a* of mean Mêsha-*saṁkrānti*, we have the *a* of mean sunrise of the day, Chaitra *śukla* 1, on which the mean luni-solar year begins.

Thus,—mean Mêsha-*saṁkrānti* of the year K.Y. 3700, A.D. 599-600, was shewn in § 325 to have occurred on (0) Saturday, 21 March A.D. 599, at mean sunrise on which day the mean moon's *tithi*-index *a* was 6228·4770. In Table LIVA, amongst the values of *a* in the first 30 days, it is seen that the next lower value is 6095·3757. 6228·4770 − 6095·3757 = 133·1013[1]. *Col. 1* shews that the interval of days was 18, and col. 2 shews the week-day 4. Mean Mêsha-*saṁkrānti* occurred on (0) Saturday. 0 (or 7) − 4 = 3 Tuesday. It is therefore found that the day Chaitra *śukla* 1, the first civil day of the mean luni-solar year, was (3) Tuesday, 3 March A.D. 599, and that the value of *a* at mean sunrise on that day was 133·1013, shewing the currency of the *tithi śukla* 1. This is the entry in Table XC below.

It comes to the same thing if the *a* of Table XCIII below is added to the *a* of mean Mêsha-*saṁkrānti*, the Table being prepared for that purpose. The *a* of mean Mesha-

[1] All values of *a* below 333·3 prove the *tithi* to have been the first of the *amānta* lunar month, *i.e.*, the first *tithi* of the first (*śukla*) fortnight.

saṁkrānti was 6228·4770. We select such a value of *a* in col. 3 of that Table as, added to the former, makes a value between 0 and 333·3̇, the limits of the *tithi śukla* 1; and note the interval of days, and the week-day resulting by addition of the given week-day (col. 2) to the week-day of mean Mēsha-*saṁkrānti*. Here the selected value of *a* is 3904·6243, since 6228·4770 + 3904·6243 = 133·1013. The interval of days is 18 (col. 1). The week-day corresponding to the day Chaitra *śukla* 1 is (0 + 3 =) 3. The result is the same as obtained by the former process.

All the entries in the general Table XC, cols. 19-23, can be proved in this way.

To find the exact phase of the mean moon, i.e. the mean *tithi*-index *a*, on any day of any year, or at any particular moment of any day, it is only necessary to add to the value of *a* given in col. 23 of Table XC for the first day of the luni-solar year the amount of increase of *a* during the intervening whole days, hours, etc., given in Tables LIVA and B (*above*, Vol. XV).

The pūrṇimānta system of lunar months.

327. The *amānta* lunar month begins at the moment of new moon, the *pūrṇimānta* month at the moment of full moon a fortnight earlier; so that the fortnight (*śukla*) between new moon and full moon bears the same month-name by both systems, while the fortnight (*krishṇa*) between full moon and new moon bears, in the *pūrṇimānta* system, the name of the lunar month next after that which it bears in the *amānta* system. The *śukla* fortnight of the first lunar month, for instance, belongs to Chaitra by both systems. The following *krishṇa* fortnight, however, belongs to Chaitra by the *amānta* system, but to Vaiśākha by the *pūrṇimānta* system.

This should always be borne in mind when examining dates of inscriptions, especially in earlier years. For references to already published explanations see § 322 above, and for a Table of corresponding fortnights and lunar months see *Indian Calendar*, Table II, Part I.

The mean moon's nakshatra.

328. The note on this subject already given (§ 308) in dealing with calculation by the *First Ārya-Siddhānta mean system* (*above*, Vol. XVI) applies equally to the *Brahma-Siddhānta* mean system. It is unnecessary to repeat it.

Tables LXXX and LXXXI, fixing the sun's mean longitude for every day of the mean solar year according to the *First Ārya-Siddhānta*, may safely be used for general calculation by the *Brahma-Siddhānta*, since the difference between the two authorities in their estimates of the length of the year only amounts to 21 seconds.[1] But in any exceptionally close case the exact value, at mean sunrise of any day in the year, of *s*, or the sun's mean longitude, can be found by multiplying the sun's mean motion in one day (Table XLIII, Vol. XIV *above*), by the number of days' interval between the day on which mean Mēsha-*saṁkrānti* occurred and the given day. The sun's mean motion in one day by the *Brahma-Siddhānta* is $59^m\ 8^s{\cdot}172655$, or in 10,000ths of circle 27·377875426.

The *Rule for work* is as follows. (i) Find, as above, value of "*a*" at mean sunrise of given day. (ii) Note number of whole days intervening between the day of mean Mēsha-*saṁkrānti* (Table XC *below, col. 13, figure in brackets*) and the given day. Turn to Table LXXX and note the increase of sun's mean long., "*s*", during that interval. Deduct from this, by Table LXXXI, the increase of long. during the hours and minutes stated in col. 17 of Table XC. The result is the sun's mean long., *s*, at mean sunrise of given day. (iii) Add *s* to *a*. This = *n*, the required index of the mean *nakshatra*, or the mean moon's place in the heavens at that moment. Table LXVIII above, or Table VIII, *Indian Calendar*, will shew in which *nakshatra* the mean moon stood at the time.

[1] In measurement by 10,000ths of circle the total difference in 365 days is 0·00665, by which amount the *Brahma-Siddhānta* is the greater.

The 19-year intercalation cycle.

329. [See *Indian Calendar*, § 50, p. 29, and notes in previous articles above on the working of the cycle by different systems.] The sequence in the present case works perfectly regularly except in four instances. In every case except these, after four successive intercalations of the same lunar month at intervals of 19 years each, the intercalated month gives way to the month next preceding it. The exceptions are—a run of five mean intercalary Bhâdrapadas between A.D. 746 and 822, five Âśvinas between 952 and 1009, five Kârttikas between 1120 and 1196, and five Paushas between 1231 and 1807.

Working Tables.

330. For general guidance the following Tables, as given for work by the *Ârya-Siddhânta* (*above*, Vol. XVI), should be used, or the similar Tables published in the *Indian Calendar*.

Table LXII, or *Ind. Cal.*, Table II, Parts I and II, for names of months and *nakshatras*.

Table LXIIIA, or *Ind. Cal.*, Table III, Part I, for collective duration of mean lunar months.

Table LXVIII, or *Ind. Cal.*, Table VIII, for indices of *tithis*, *karaṇas*, *nakshatras* and *yōgas*.

Table LXIX, or *Ind. Cal.*, Table IX, for the serial number of days of the year and their names and numbers in European reckoning.

Table LXX, or *Ind. Cal.*, Table X, for conversion of the indices of *tithis*, *nakshatras* and *yōgas* into time.

Table LXXI, the European Calendar for 23 centuries. [Table XIII, *Indian Calendar*, may also be used, but the former is easier.]

Table XCI below gives the collective duration of mean solar months, measured from the moment of mean Mêsha-*saṁkrânti*, the astronomical beginning of the mean solar year; also the increase of *a*, the mean *tithi*-index, during the interval.

Table XCII shews the value of *a* at the beginning of each mean solar century of the Kaliyuga, that is to say, its value at mean sunrise of the day on which each such solar century began.

For odd years of such centuries Table LXXXVII (*above*, *Vol. XVII*) is to be used in conjunction with Table XCII, addition of the two given values of *a* yielding the value of *a* at mean sunrise of the day on which each mean year of the Kaliyuga solar century began.

For increase of *a* in subsequent days, hours, etc., in any K.Y. year, or any moment of any day Tables LIVA and B (*above*, Vol. XV) are to be used.

The use of Table XCIII is explained in § 326 above.

Table XCIV-A to F enables the units and decimals of units of results obtained from our system of reckoning in measurement by 10,000ths of a circle, to be converted readily into time, if required. The same can be converted into space-measurement in degrees, etc., by Table XLVB (*above*, Vol. XIV).

EXAMPLES.

[*N.B.*—Work may always be done in whole numbers, resorting to decimals only in close cases.]

Example 1. To find the mean tithi-index, or phase of moon, at mean sunrise of the day on which mean Mêsha-saṁkrânti occurred in any year.

This is a necessary operation for finding the *tithi*-index *a* at the *moment* of mean Mêsha-*saṁkrânti*, which is obtained by addition of the *a* of subsequent hours, minutes, etc., to the *a*

of mean sunrise. [The intercalation of lunar months is decided by the value of *a* at the moment of mean Mēsha-*saṁkrānti*.] Two cases are considered, A and B.

A. Take the year Kaliyuga 3851 expired. This was the Śaka year 672 expired. It began (Table XC, *cols. 13-17*) astronomically at $5^h\ 49^m\ 39^s$ after mean sunrise on Sunday, 22 March A.D. 750. We want to know the moon's phase, as shewn by the *tithi*-index *a*, at mean sunrise of that day. ["*w.-d.*" = week-day.]

		w.-d.	*a.*
(*Table XCII.*) At beginning of K.Y. Century 38, mean sunrise		(0)	5100·3761
(*Table LXXXVII.*) At beginning of K.Y. year 51,	do.	(1)	8036·6243
At mean sunrise on the Sunday in question . . .		(1)	3137·0004

B. The year K.Y. 3849, Śaka 670 both expired. This began (*Table XC*) at $17^h\ 25^m\ 21^s$ after mean sunrise on Thursday, 21 March A.D. 748. The first result shews the *a* for mean sunrise on Friday, 22 March, and the *a* for one day has to be deducted. This is due to the fact that Table LXXXVII has to serve for all K.Y. centuries, common or defective. The correction required is never more than that for one day.

(*Table XCII.*) At beginning of K.Y. Century 38, mean sunrise		(0)	5100·3761
(*Table LXXXVII.*) At beginning of K.Y. year 49,	do.	(6)	835·2749
At mean sunrise on Friday, 22 Mar.		(6)	5935·6510
Deduct one day's value of *a*		−(1)	−338·6320
At mean sunrise on Thursday, 21 Mar.		(5)	5597·0190

Example 2. To find the civil day corresponding to Chaitra śukla 1, or the first civil day of the luni-solar year; and the value of a *(place of mean moon) at mean sunrise thereon.*

The civil day corresponding to mean Chaitra *śukla* 1 is that on which the mean *tithi* "*śukla* 1" expired. The *tithi*-index (*a* =) 333·3 marks the last instant of the first *śukla tithi*, so that we have to find a day on which at mean sunrise the *tithi*-index *a* was between 0 and 333·3. The *amānta* lunar month called "Chaitra" begins with the first new moon after the Mīna-*saṁkrānti*, and the civil day called "Chaitra *śukla* 1" is necessarily earlier than the day on which mean Mēsha-*saṁkrānti* occurred. We have to find the number of days' interval between these two days. There are two ways of ascertaining these points, one by using Table XCIII and adding its figures, one by using Table LIV A and subtracting its figures.

(i) Take the year in Example 1, A, above. The value of *a* at mean sunrise of Sunday, 22 March A.D. 750, was found to be 3137·0004. We turn to Table XCIII and select in col. 3 such a value of *a* as, added to 3137·0004, will result in a total value of *a* between 0 and 333·3. This is found to be 6952·3121, the sum of the two (always disregarding quantities over 10,000) being 89·3125. The interval of whole days from mean Mēsha-*saṁkrānti* day was 9 (*col. 1*). Adding the number of the week-day (*col. 2*), viz. 5, to the week-day of mean Mēsha-*saṁkrānti*, viz. 1 Sunday, we have the week-day 6 Friday. Mean Mēsha-*saṁkrānti* occurred on Sunday, 22 March; and, therefore, it has been determined that the day Chaitra *śukla* 1, the first day of the luni-solar year, was Friday, 13 March A.D. 750, on which day, *a* being 89·3125, Chaitra *śukla* 1 was the current *tithi* at mean sunrise.

Similarly in Example 1, B. At mean sunrise of (5) Thursday, 21 March A.D. 748, *a* was 5597·0190. Add (Table XCIII, *col. 3*) 4581·8882. Result 178·9072. The interval of days was

(*col. 1*) 16. The week-day number was 5. The week-day of 21 March was 5 (Thursday). Hence the week-day 16 days earlier was 5+5=3 Tuesday. So the beginning of the mean luni-solar year was on Tuesday, 5 March A.D. 748, on which date at mean sunrise the mean *tithi* "*śukla* 1" was current, the value of *a* at that moment being 178·9072.

The entries in Table XC against these years correspond to these results.

(ii) The same results are obtained by using Table LIVA (*above*, Vol. XV) and deducting the figures for the interval of whole days between the two occurrences. We note that value of *a* in the first 30 days of that Table which is next lower than the value of *a* already found for the day of mean Mēsha-*saṁkrānti*, and deduct the former from the latter. The number of intervening days (*col. 1*) and the number of week-days (*col. 2*) stand against the selected entry. This week-day number is deducted, of course, from the week-day of mean Mēsha-*saṁkrānti*. Thus—

A. For K.Y. 3851, A.D. 750.

	w.-d.	*a.*
(*Example 1, A.*) For mean sunrise on Sunday, 22 March A.D. 750.	(1)	3137·0004
(*Table LIVA.*) Next lower value of *a*, and week-day	—(2)	—3047·6879
At mean sunrise of the day Chaitra *śukla* 1 . . .	(6)	89·3125

The interval of days (*col. 1*) was nine. 6=Friday. Hence the day corresponding to Chaitra *śukla* 1 was Friday, 13 March, and at mean sunrise the mean *tithi* Chaitra *śukla* 1 was current, the value of *a* being 89·3125.

B. For K.Y. 3849, A.D. 748.

(*Example 1, B.*) At mean sunrise on Thursday, 21 March, A.D. 748.	(5)	5597·0190
(*Table LIVA.*) Next lower value of *a*, and week-day	—(2)	—5418·1118
At mean sunrise of the day Chaitra *śukla* 1 . . .	(3)	178·9072

The interval of days was 16. 3=Tuesday. Hence the day corresponding to Chaitra *śukla* 1 was Tuesday, 5 March A.D. 748, and at mean sunrise the value of *a* was 178·9072.

These results are the same as those found by the former process. The examples enable any worker to prove the correctness of all my entries in cols. 19-23 of the general Table XC below.

Example 3. To find if a lunar month was or was not intercalated in the given year.

It will be enough, for this problem, to refer to Example 3 (*above, Vol. XVI*) of my article on the *Ārya-Siddhānta—mean system*. The work here is precisely similar; but for the values of *a* for hours and minutes Table LIVB (*Vol. XV above*) should be used, and Table XCI for the advance of *a* during the mean solar months, etc.

Example 4. To find the mean tithi-index a, *shewing phase of moon, at mean sunrise of any day in the year; or at any moment of any day.*

Table XC (cols. 19-23) gives the civil day corresponding to mean Chaitra *śukla* 1 (the initial day of the mean luni-solar year), its serial number (in brackets) from January 1st of the equivalent A.D. year, and the mean *tithi*-index *a* at mean sunrise. Calculate by Table III, *Indian Calendar*, or by Table LXIIIA (*above*, Vol. XVI) the interval of whole days from that day to the given day, and, if necessary, the excess of hours, minutes, etc., to the given moment on that day. Add the increment of *a* for the interval of whole days from Table LIVA and for fractions of days from Table LIVB to the *a*, as above, of the initial day; as also the number of days' interval and the corresponding week-day.

E.g. Required the *tithi*-index at mean sunrise of the day called "Âshâḍha *śukla* 4" in Saka 547 expired, or A.D. 625-26, and the corresponding A.D. day and week-day.

In this year there was no intercalated month. The interval from the day "Chaitra *śukla* 1" to the day "Âshâḍha *śukla* 4" is approximately (Table LXIII-A above, p. 335) 93 days. We try this—

	d.	w.-d.	a.
Table XC. Chaitra *śukla* 1, mean sunrise . .	(74)	(6)	184·6506
Table LIVA for 93 days	+(93)	(2)	1492·7746
	(167)	(1)	1677·4252
This value of "a" (*Table LXVIII*) shews that the 6th *śukla tithi* was current at mean sunrise. ∴ Deduct for 2 days . . .	−(2)	−(2)	−677·2640
At mean sunrise on Âshâḍha *śukla* 4 . . .	(165)	(6)	1000·1612

Table LXVIII or VIII *Indian Calendar*, shews the currency of the 4th *śukla tithi*, at that mean sunrise, since its first point is when $a=1{,}000$. Day 165 was (*Table IX, Indian Calendar, or LXIX, above*) 14th June A.D. 625. 6=Friday. We learn, however, that the 4th mean *tithi* had begun only about ¼ of a minute before the moment of mean sunrise; so that if the basis of calculation had been the moment of true sunrise (a little earlier than mean sunrise) the corresponding day might have been Thursday, 13 June.

Example 5. To find the nakshatra, or place in the heavens of the mean moon, at mean sunrise of any day or of any later moment in the day.

Take the case in the last example. It is required to find the value of "*n*". the *nakshatra*-index, at mean sunrise of the day called, in the mean system, "Ashāḍha *śukla* 4" in the given year, A.D. 625.

The mean *tithi*-index, "*a*", at that mean sunrise was found to be 1000·1612. Since $s+a=n$ (§ *327 above*), we have to ascertain the value of "*s*", the sun's mean longitude at that moment.

The day, 14 June, was the 165th day after Jan. 1 in that year. Mean Mêsha-*saṁkrānti* had taken place on (Table XC, *cols. 13-17*) the 79th day at $22^h\ 30^m\ 54^s$ after mean sunrise. The day 14 June was (165−79) 86 days later. We proceed as follows :—

		s.
Table LXXX, *p. 444*. Interval of 86 days		2354·4957
Less (Table LXXXI) for 22^h	25·0964	
30^m	0·5704	
54^s	0·0171	
.	25·6839	−25·6839
At mean sunrise on the day Âshâḍha *śukla* 4 sun's mean long., "*s*" =		2328·8118
Add "*a*" as already found for that moment		1000·1612
At mean sunrise on that day "*n*"=		3328·9730

This last is the required *nakshatra*-index. Reference to Table VIII, *Indian Calendar*, or Table LXVIII (*above* Vol. XVI) shews that the moon was then in the *nakshatra* Aślêshâ by the

equal-space system of division of the ecliptic, which ended when "n" =3333·3̇ ; but that by the system of Garga or the *Brahma-Siddhānta* (our present authority) she was in Maghā, of which the ending points are respectively 3518·5 and 3477·1. Converted into degrees (Table VIII-B, *Indian Calendar, or* Table XLV-B, *above*) the moon at that mean sunrise stood at about 119°51′.

For the value of "*n*" at any later hour of the given day the index-value for the time since mean sunrise must be added (Table LXXXI) to the "*n*" of mean sunrise. At about 3 hours 50 min. after mean sunrise, for instance, the mean moon entered Maghā by the equal-space system ; for the beginning point of that *nakshatra* is 3333·3̇. The increase of "*n*" in 3 hours 50 min. is 4·3728, and 3328·9730+4·3728=3333·3458.

Example 6. To find the yōga, "y", at the same moment as in Example 5.

The formula for finding the *yōga*-index is either *s*+*n*="*y*", the *yōga*-index ; or, in cases where it is not necessary to calculate *n* (the *nakshatra*), 2 "*s*"+*a*="*y*". Here, at mean sunrise on 14 June A.D. 625, we have found "*s*"=2328·8118 and "*n*"=3328·9730. The *yōga*-index, "*y*", therefore, =5657·7848 ; and reference to Table VIII, *Indian Calendar*, cols. 12-13, or Table LXVIII (*above, Vol. XVI, cols. 6, 8, 9, 10*), shews that the mean moon was at that moment in the *yōga* Siddhi. Again 2 *s*=4657·6236, and this +"*a*," which was found to be 1000·1612=5657·7848, the same as before.

TABLE XC.

Remarks.

K.Y. 3736 expired, A.D. 635-36. A very close case in the matter of intercalation of lunar month. Mean new moon occurred about 2^m after the moment of the Karka-*saṁkrānti* (mean sun at long. 90°), and, therefore, at that moment the mean moon was waning, while she was waxing at the next, Siṁha-*saṁkrānti* (mean sun at 120°). Accordingly the intercalated month was Śrāvaṇa.

K.Y. 3923 expired, A.D. 822-23. According to the 19-year sequence of intercalations the same month is generally intercalated four times running, i.e. at intervals of 19 years each. Here, however, is an instance of a fifth intercalation of the same month. [See § 329 of text above.]

K.Y. 4110 expired, A.D. 1009-10. A similar case. Āśvina intercalated for the fifth time.

K.Y. 4297 expired, A.D. 1196-97. Another. Kārttika intercalated for the fifth time.

K.Y. 4408 expired, A.D. 1307-08. Another. Pausha intercalated for the fifth time. This was a very close case. The moment of mean new moon was about 1 minute after the mean sun reached the Dhanus-*saṁkrānti* (mean sun at long. 240°), but she was actually waning at the moment of the *saṁkrānti* and was waxing at the next, Makara, *saṁkrānti*. Consequently the lunar month Pausha was intercalated.

TABLE

MEAN SYSTEM TABLE,

Numbers of columns conform

(*Cols. 1 to 4.*)—The years herein stated are the *current* years corresponding

(*Cols. 6 and 7.*)—*Samvatsara-names of mean solar years in italics shew cases*

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
						JOVIAN SAMVATSARA.		
Kali.	Saka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3701	522	657	6		599-600	50 Anala . .		...
3702	523	658	7		*600-01	51 Pingala . .		2 Vaiśâkha .
3703	524	659	8		601-02	52 Kâlayukta . .		...
3704	525	660	9		602-03	53 Siddhârthin . .		10 Pausha .
3705	526	661	10		603-04	54 Raudra . .		...
3706	527	662	11		*604-05	55 Durmati . .		...
3707	528	663	12		605-06	56 Dundubhi . .		7 Âśvina .
3708	529	664	13		606-07	57 Rudhirôdgârin .		...
3709	530	665	14		607-08	58 Raktâksha . .		...
3710	531	666	15		*608-09	59 Krôdhana . .		8 Jyêshṭha .
3711	532	667	16		609-10	60 Kshaya . .		...
3712	533	668	17		610-11	1 Prabhava . .		12 Phâlguna .
3713	534	669	18		611-12	2 Vibhava . .		...
3714	535	670	19		*612-13	3 Śukla . .		...
3715	536	671	20		613-14	4 Pramôda . .		8 Kârttika .
3716	537	672	21		614-15	5 Prajâpati . .		...
3717	538	673	22		615-16	6 Angiras . .		...
3718	539	674	23		*616-17	7 Śrîmukha . .		5 Śrâvaṇa .
3719	540	675	24		617-18	8 Bhâva . .		...
3720	541	676	25		618-19	9 Yuvan . .		...

XC.

BRAHMA-SIDDHÂNTA.

to Table I, "Indian Calendar."

to the A.D. years in col. 5; as in Table I, "Indian Calendar."

where differences exist from Sûrya-Siddhânta nomenclature in true solar years.

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrânti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
21 Mar. (80) . .	0 Sat. .	5 15 0	3 Mar. (62) .	3 Tues. .	133·1013	3701
20 Mar. (80) . .	1 Sun. .	11 27 9	20 Feb. (51) .	0 Sat. .	8·8241	3702
20 Mar. (79) . .	2 Mon. .	17 39 18	10 Mar. (69) .	6 Fri. .	43·5065	3703
20 Mar. (79) . .	3 Tues. .	23 51 27	28 Feb. (59) .	4 Wed. .	257·8614	3704
21 Mar. (80) . .	5 Thur. .	6 3 36	19 Mar. (78) .	3 Tues. .	292·5437	3705
20 Mar. (80) . .	6 Fri. .	12 15 45	7 Mar. (67) .	0 Sat. .	168·2666	3706
20 Mar. (79) . .	0 Sat. .	18 27 54	24 Feb. (55) .	4 Wed. .	43·3394	3707
21 Mar. (80) . .	2 Mon. .	0 40 3	15 Mar. (74) .	3 Tues. .	78·6718	3708
21 Mar. (80) . .	3 Tues. .	6 52 12	5 Mar. (64) .	1 Sun. .	293·0266	3709
20 Mar. (80) . .	4 Wed. .	13 4 21	22 Feb. (53) .	5 Thur. .	168·7494	3710
20 Mar. (79) . .	5 Thur. .	19 16 30	12 Mar. (71) .	4 Wed. .	203·4218	3711
21 Mar. (80) . .	0 Sat. .	1 28 39	1 Mar. (60) .	1 Sun. .	79·1547	3712
21 Mar. (80) . .	1 Sun. .	7 40 48	20 Mar. (79) .	0 Sat. .	113·8371	3713
20 Mar. (80) . .	2 Mon. .	13 52 57	9 Mar. (69) .	5 Thur. .	328·1918	3714
20 Mar. (79) . .	3 Tues. .	20 5 6	26 Feb. (57) .	2 Mon. .	203·9147	3715
21 Mar. (80) . .	5 Thur. .	2 17 15	17 Mar. (76) .	1 Sun. .	238·5972	3716
21 Mar. (80) . .	6 Fri. .	8 29 24	6 Mar. (65) .	5 Thur. .	114·3199	3717
20 Mar. (80) . .	0 Sat. .	14 41 33	24 Feb. (55) .	3 Tues. .	328·6747	3718
20 Mar. (79) . .	1 Sun. .	20 53 42	13 Mar. (72) .	1 Sun. .	24·7252	3719
21 Mar. (80) . .	3 Tues. .	3 5 51	3 Mar. (62) .	6 Fri. .	239·0801	3720

TABLE

CONCURRENT YEAR.						JOVIAN SAMVATSARA.		Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Meshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3721	542	677	26		619-20		10 Dhātṛi . . .	1 Chaitra .
3722	543	678	27		*620-21		11 Īśvara . . .	...
3723	544	679	28		621-22		12 Bahudhānya . .	10 Pausha .
3724	545	680	29		622-23		13 Pramāthin . . .	...
3725	546	681	30		623-24		14 Vikrama . . .	...
3726	547	682	31		*624-25		15 Vṛisha . . .	6 Bhādrapada .
3727	548	683	32		625-26		16 Chitrabhānu . .	...
3728	549	684	33		626-27		17 Subhānu . . .	...
3729	550	685	34		627-28		18 Tāraṇa . . .	3 Jyēshṭha .
3730	551	686	35		*628-29		19 Pārthiva . . .	...
3731	552	687	36		629-30		20 Vyaya . . .	11 Māgha .
3732	553	688	37		630-31		21 Sarvajit . . .	...
3733	554	689	38		631-32		22 Sarvadhārin . .	...
3734	555	690	39		*632-33		23 Virōdhin . . .	8 Kārttika .
3735	556	691	40		633-34		24 Vikṛita . . .	...
3736	557	692	41		634-35		25 Khara . . .	...
3737	558	693	42		635-36		26 Nandana . . .	5 Śrāvaṇa § .
3738	559	694	43		*636-37		27 Vijaya . . .	...
3739	560	695	44		637-38		28 Jaya . . .	...
3740	561	696	45		638-39		29 Manmatha . .	1 Chaitra .
3741	562	697	46		639-40		30 Durmukha . .	...
3742	563	698	47		*640-41		31 Hēmalamba . .	10 Pausha .
3743	564	699	48		641-42		32 Vilamba . . .	...
3744	565	700	49		642-43		33 Vikārin . . .	...
3745	566	701	50		643-44		34 Śārvarin . . .	6 Bhādrapada .

§ See "Remarks," p. 215 above.

XC—*contd.*

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17			19	20	23	1
		H.	M.	S.				
21 Mar. (80)	4 Wed.	9	18	0	20 Feb. (51)	3 Tues.	114·8028	3721
20 Mar. (80)	5 Thur.	15	30	9	10 Mar. (70)	2 Mon.	149·4852	3722
20 Mar. (79)	6 Fri.	21	42	18	27 Feb. (58)	6 Fri.	25·2081	3723
21 Mar. (80)	1 Sun.	3	54	27	18 Mar. (77)	5 Thur.	59·8904	3724
21 Mar. (80)	2 Mon.	10	6	36	8 Mar. (67)	3 Tues.	274·2453	3725
20 Mar. (80)	3 Tues.	16	18	45	25 Feb. (56)	0 Sat.	149·9682	3726
20 Mar. (79)	4 Wed.	22	30	54	15 Mar. (74)	6 Fri.	184·6506	3727
21 Mar. (80)	6 Fri.	4	43	3	4 Mar. (63)	3 Tues.	60·3734	3728
21 Mar. (80)	0 Sat.	10	55	12	22 Feb. (53)	1 Sun.	274·7282	3729
20 Mar. (80)	1 Sun.	17	7	21	12 Mar. (72)	0 Sat.	309·4106	3730
20 Mar. (79)	2 Mon.	23	19	30	1 Mar. (60)	4 Wed.	185·1834	3731
21 Mar. (80)	4 Wed.	5	31	39	20 Mar. (79)	3 Tues.	219·8158	3732
21 Mar. (80)	5 Thur.	11	43	48	9 Mar. (68)	0 Sat.	95·5387	3733
20 Mar. (80)	6 Fri.	17	55	57	27 Feb. (58)	5 Thur.	309·8935	3734
21 Mar. (80)	1 Sun.	0	8	6	16 Mar. (75)	3 Tues.	5·9439	3735
21 Mar. (80)	2 Mon.	6	20	15	6 Mar. (65)	1 Sun.	220·2987	3736
21 Mar. (80)	3 Tues.	12	32	24	23 Feb. (54)	5 Thur.	96·0216	3737
20 Mar. (80)	4 Wed.	18	44	33	13 Mar. (73)	4 Wed.	130·7040	3738
21 Mar. (80)	6 Fri.	0	56	42	2 Mar. (61)	1 Sun.	6·4268	3739
21 Mar. (80)	0 Sat.	7	8	51	20 Feb. (51)	6 Fri.	220·7816	3740
21 Mar. (80)	1 Sun.	13	21	0	11 Mar. (70)	5 Thur.	255·4640	3741
20 Mar. (80)	2 Mon.	19	33	9	28 Feb. (59)	2 Mon.	131·1868	3742
21 Mar. (80)	4 Wed.	1	45	18	18 Mar. (77)	1 Sun.	165·8692	3743
21 Mar. (80)	5 Thur.	7	57	27	7 Mar. (66)	5 Thur.	41·5921	3744
21 Mar. (80)	6 Fri.	14	9	36	25 Feb. (56)	3 Tues.	255·9470	3745

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	Northern system.	Mean intercalated (*adhika*) lunar month.
1	2	3	3*a*	4	5	6	7	8*a*
3746	567	702	51		*644-45	35 Plava . . .		...
3747	568	703	52		645-46	36 Śubhakṛit . . .		...
3748	569	704	53		646-47	37 Śōbhana . . .		3 Jyēshṭha .
3749	570	705	54		647-48	38 Krōdhin . . .		...
3750	571	706	55		*648-49	39 Viśvāvasu † . .		11 Māgha .
3751	572	707	56		649-50	41 *Plavaṅga* . . .		...
3752	573	708	57		650-51	42 *Kīlaka* . . .		...
3753	574	709	58		651-52	43 *Saumya* . . .		8 Kārttika .
3754	575	710	59		*652-53	44 *Sādhāraṇa* . .		...
3755	576	711	60		653-54	45 *Virōdhakṛit* . .		...
3756	577	712	61		654-55	46 Paridhāvin . .		4 Āshāḍha .
3757	578	713	62		655-56	47 Pramādin . . .		...
3758	579	714	63		*656-57	48 Ānanda . . .		...
3759	580	715	64		657-58	49 Rākshasa . . .		1 Chaitra .
3760	581	716	65		658-59	50 Anala . . .		...
3761	582	717	66		659-60	51 Piṅgala . . .		9 Mārgaśira .
3762	583	718	67		*660-61	52 Kālayukta . . .		...
3763	584	719	68		661-62	53 Siddhārthin . .		...
3764	585	720	69		662-63	54 Raudra . . .		6 Bhādrapada .
3765	586	721	70		663-64	55 Durmati . . .		...
3766	587	722	71		*664-65	56 Dundubhi . . .		...
3767	588	723	72		665-66	57 Rudhirōdgārin . .		2 Vaiśākha .
3768	589	724	73		666-67	58 Raktāksha . . .		...
3769	590	725	74		667-68	59 Krōdhana . . .		11 Māgha .
3770	591	726	75		*668-69	60 Kshaya . . .		...

† 40 Parābhava was suppressed, both in mean and true reckoning.

XC—*contd.*

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.				MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.		Day and month, A.D.	Week-day.	a (here = t, the index of the *tithi*).	
13	14	17		19	20	23	1
		H. M.	S.				
20 Mar. (80)	0 Sat.	20 21	45	15 Mar. (75)	2 Mon.	290·6293	3746
21 Mar. (80)	2 Mon.	2 33	54	4 Mar. (63)	6 Fri.	166·8522	3747
21 Mar. (80)	3 Tues.	8 46	3	21 Feb. (52)	3 Tues.	42·0750	3748
21 Mar. (80)	4 Wed.	14 58	12	12 Mar. (71)	2 Mon.	76·7573	3749
20 Mar. (80)	5 Thur.	21 10	21	1 Mar. (61)	0 Sat.	291·1122	3750
21 Mar. (80)	0 Sat.	3 22	30	20 Mar. (79)	6 Fri.	325·7946	3751
21 Mar. (80)	1 Sun.	9 34	39	9 Mar. (68)	3 Tues.	201·5175	3752
21 Mar. (80)	2 Mon.	15 46	48	26 Feb. (57)	0 Sat.	77·2402	3753
20 Mar. (80)	3 Tues.	21 58	57	16 Mar. (76)	0 Sat.	111·9227	3754
21 Mar. (80)	5 Thur.	4 11	6	6 Mar. (65)	4 Wed.	326·2775	3755
21 Mar. (80)	6 Fri.	10 23	15	23 Feb. (54)	1 Sun.	202·0003	3756
21 Mar. (80)	0 Sat.	16 35	24	14 Mar. (73)	0 Sat.	236·6827	3757
20 Mar. (80)	1 Sun.	22 47	33	2 Mar. (62)	4 Wed.	112·4056	3758
21 Mar. (80)	3 Tues.	4 59	42	20 Feb. (51)	2 Mon.	326·7604	3759
21 Mar. (80)	4 Wed.	11 11	51	10 Mar. (69)	0 Sat.	22·8108	3760
21 Mar. (80)	5 Thur.	17 24	0	28 Feb. (59)	5 Thur.	237·1656	3761
20 Mar. (80)	6 Fri.	23 36	9	18 Mar. (78)	4 Wed.	271·8480	3762
21 Mar. (80)	1 Sun.	5 48	18	7 Mar. (66)	1 Sun.	147·5708	3763
21 Mar. (80)	2 Mon.	12 0	27	24 Feb. (55)	5 Thur.	23·2037	3764
21 Mar. (80)	3 Tues.	18 12	36	15 Mar. (74)	4 Wed.	57·9761	3765
21 Mar. (81)	5 Thur.	0 24	45	4 Mar. (64)	2 Mon.	272·3310	3766
21 Mar. (80)	6 Fri.	6 36	54	21 Feb. (52)	6 Fri.	148·0537	3767
21 Mar. (80)	0 Sat.	12 49	3	12 Mar. (71)	5 Thur.	182·7361	3768
21 Mar. (80)	1 Sun.	19 1	12	1 Mar. (60)	2 Mon.	58·4590	3769
21 Mar. (81)	3 Tues.	1 13	21	19 Mar. (79)	1 Sun.	93·1413	3770

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	Mean intercalated (*adhika*) lunar month.
1	2	3	3a	4	5	6	7	8a
3771	592	727	76		669-70	1 Prabhava . . .		...
3772	593	728	77		670-71	2 Vibhava . . .		7 Āśvina .
3773	594	729	78		671-72	3 Sukla . . .		...
3774	595	730	79		*672-73	4 Pramōda . . .		...
3775	596	731	80		673-74	5 Prajāpati . . .		4 Āshāḍha .
3776	597	732	81		674-75	6 Aṅgiras . . .		...
3777	598	733	82		675-76	7 Śrīmukha . . .		...
3778	599	734	83		*676-77	8 Bhāva . . .		1 Chaitra .
3779	600	735	84		677-78	9 Yuvan . . .		...
3780	601	736	85		678-79	10 Dhātṛi . . .		9 Mārgaśira .
3781	602	737	86		679-80	11 Īśvara . . .		...
3782	603	738	87		*680-81	12 Bahudhānya . .		...
3783	604	739	88		681-82	13 Pramāthin . . .		6 Bhādrapada .
3784	605	740	89		682-83	14 Vikrama . . .		...
3785	606	741	90		683-84	15 Vṛisha . . .		...
3786	607	742	91		*684-85	16 Chitrabhānu . .		2 Vaiśākha .
3787	608	743	92		685-86	17 Subhānu . . .		...
3788	609	744	93		686-87	18 Tāraṇa . . .		11 Māgha .
3789	610	745	94		687-88	19 Pārthiva . . .		...
3790	611	746	95		*688-89	20 Vyaya . . .		...
3791	612	747	96		689-90	21 Sarvajit . . .		7 Āśvina .
3792	613	748	97		690-91	22 Sarvadhārin . .		...
3793	614	749	98		691-92	23 Virōdhin . . .		...
3794	615	750	99		*692-93	24 Vikṛita . . .		4 Āshāḍha .
3795	616	751	100		693-94	25 Khara . . .		...

XC—*contd.*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mesha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
21 Mar. (80) . .	4 Wed. .	7 25 30	9 Mar. (68) .	6 Fri. .	307·4962	3771
21 Mar. (80) . .	5 Thur. .	13 37 39	26 Feb. (57) .	3 Tues. .	183·2190	3772
21 Mar. (80) . .	6 Fri. .	19 49 48	17 Mar. (76) .	2 Mon. .	217·9015	3773
21 Mar. (81) . .	1 Sun. .	2 1 57	5 Mar. (65) .	6 Fri. .	93·6242	3774
21 Mar. (80) . .	2 Mon. .	8 14 6	23 Feb. (54) .	4 Wed. .	307·9791	3775
21 Mar. (80) . .	3 Tues. .	14 26 15	13 Mar. (72) .	2 Mon. .	4·0295	3776
21 Mar. (80) . .	4 Wed. .	20 38 24	3 Mar. (62) .	0 Sat. .	218·3843	3777
21 Mar. (81) . .	6 Fri. .	2 50 33	20 Feb. (51) .	4 Wed. .	94·1071	3778
21 Mar. (80) . .	0 Sat. .	9 2 42	10 Mar. (69) .	3 Tues. .	128·7896	3779
21 Mar. (80) . .	1 Sun. .	15 14 51	27 Feb. (58) .	0 Sat. .	4·5124	3780
21 Mar. (80) . .	2 Mon. .	21 27 0	18 Mar. (77) .	6 Fri. .	39·1947	3781
21 Mar. (81) . .	4 Wed. .	3 39 9	7 Mar. (67) .	4 Wed. .	253·5496	3782
21 Mar. (80) . .	5 Thur. .	9 51 18	24 Feb. (55) .	1 Sun. .	129·2725	3783
21 Mar. (80) . .	6 Fri. .	16 3 27	15 Mar. (74) .	0 Sat. .	163·9549	3784
21 Mar. (80) . .	0 Sat. .	22 15 36	4 Mar. (63) .	4 Wed. .	39·6776	3785
21 Mar. (81) . .	2 Mon. .	4 27 45	22 Feb. (53) .	2 Mon. .	254·0825	3786
21 Mar. (80) . .	3 Tues. .	10 39 54	12 Mar. (71) .	1 Sun. .	288·7149	3787
21 Mar. (80) . .	4 Wed. .	16 52 3	1 Mar. (60) .	5 Thur. .	164·4377	3788
21 Mar. (80) . .	5 Thur. .	23 4 12	20 Mar. (79) .	4 Wed. .	199·1200	3789
21 Mar. (81) . .	0 Sat. .	5 16 21	8 Mar. (68) .	1 Sun. .	74·8430	3790
21 Mar. (80) . .	1 Sun. .	11 28 30	26 Feb. (57) .	6 Fri. .	289·1978	3791
21 Mar. (80) . .	2 Mon. .	17 40 39	17 Mar. (76) .	5 Thur. .	323·8802	3792
21 Mar. (80) . .	3 Tues. .	23 52 48	6 Mar. (65) .	2 Mon. .	199·6030	3793
21 Mar. (81) . .	5 Thur. .	6 4 57	23 Feb. (54) .	6 Fri. .	75·3259	3794
21 Mar. (80) . .	6 Fri. .	12 17 6	13 Mar. (72) .	5 Thur. .	110·0082	3795

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
						Jovian Saṁvatsara.		
Kali.	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3796	617	752	101		694-95	26 Nandana		12 Phâlguna
3797	618	753	102		695-96	27 Vijaya		...
3798	619	754	103		*696-97	28 Jaya		...
3799	620	755	104		697-98	29 Manmatha		9 Mârgaśira
3800	621	756	105		698-99	30 Durmukha		...
3801	622	757	106		699-700	31 Hêmalamba		...
3802	623	758	107		*700-01	32 Vilamba		5 Śrâvaṇa
3803	624	759	108		701-02	33 Vikârin		...
3804	625	760	109		702-03	34 Śârvarin		...
3805	626	761	110		703-04	35 Plava		2 Vaiśâkha
3806	627	762	111		*704-05	36 Śubhakṛit		...
3807	628	763	112		705-06	37 Śôbhana		10 Pausha
3808	629	764	113		706-07	38 Krôdhin		...
3809	630	765	114		707-08	39 Viśvâvasu		...
3810	631	766	115		*708-09	40 Parâbhava		7 Âśvina
3811	632	767	116		709-10	41 Plavaṅga		...
3812	633	768	117		710-11	42 Kîlaka		...
3813	634	769	118		711-12	43 Saumya		4 Ashâḍha
3814	635	770	119		*712-13	44 Sâdhâraṇa		...
3815	636	771	120		713-14	45 Virôdhakṛit		12 Phâlguna
3816	637	772	121		714-15	46 Paridhâvin		...
3817	638	773	122		715-16	47 Pramâdin		...
3818	639	774	123		*716-17	48 Ânanda		9 Mârgaśira
3819	640	775	124		717-18	49 Râkshasa		...
3820	641	776	125		718-19	50 Anala		...

XO—*contd.*

COMMENCEMENT OF THE									Kali.
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrânti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).		
13	14	17			19	20	23		1
		H.	M.	S.					
21 Mar. (80)	0 Sat.	18	29	15	3 Mar. (62)	3 Tues.	324·3631		3796
22 Mar. (81)	2 Mon.	0	41	24	21 Mar. (80)	1 Sun.	20·4135		3797
21 Mar. (81)	3 Tues.	6	53	33	10 Mar. (70)	6 Fri.	234·7683		3798
21 Mar. (80)	4 Wed.	13	5	42	27 Feb. (58)	3 Tues.	110·4911		3799
21 Mar. (80)	5 Thur.	19	17	51	18 Mar. (77)	2 Mon.	145·1735		3800
22 Mar. (81)	0 Sat.	1	30	0	7 Mar. (66)	6 Fri.	20·8963		3801
21 Mar. (81)	1 Sun.	7	42	9	25 Feb. (56)	4 Wed.	235·2512		3802
21 Mar. (80)	2 Mon.	13	54	18	15 Mar. (74)	3 Tues.	269·9336		3803
21 Mar. (80)	3 Tues.	20	6	27	4 Mar. (63)	0 Sat.	145·6564		3804
22 Mar. (81)	5 Thur.	2	18	36	21 Feb. (52)	4 Wed.	21·3792		3805
21 Mar. (81)	6 Fri.	8	30	45	11 Mar. (71)	3 Tues.	56·0616		3806
21 Mar. (80)	0 Sat.	14	42	54	1 Mar. (60)	1 Sun.	270·4164		3807
21 Mar. (80)	1 Sun.	20	55	3	20 Mar. (79)	0 Sat.	305·0988		3808
22 Mar. (81)	3 Tues.	3	7	12	9 Mar. (68)	4 Wed.	180·8217		3809
21 Mar. (81)	4 Wed.	9	19	21	26 Feb. (57)	1 Sun.	56·5444		3810
21 Mar. (80)	5 Thur.	15	31	30	16 Mar. (75)	0 Sat.	91·2269		3811
21 Mar. (80)	6 Fri.	21	43	39	6 Mar. (65)	5 Thur.	305·5817		3812
22 Mar. (81)	1 Sun.	3	55	48	23 Feb. (54)	2 Mon.	181·3046		3813
21 Mar. (81)	2 Mon.	10	7	57	13 Mar. (73)	1 Sun.	215·9869		3814
21 Mar. (80)	3 Tues.	16	20	6	2 Mar. (61)	5 Thur.	91·7008		3815
21 Mar. (80)	4 Wed.	22	32	15	21 Mar. (80)	4 Wed.	126·3922		3816
22 Mar. (81)	6 Fri.	4	44	24	10 Mar. (69)	1 Sun.	2·1150		3817
21 Mar. (81)	0 Sat.	10	56	33	28 Feb. (59)	6 Fri.	216·4698		3818
21 Mar. (80)	1 Sun.	17	8	42	18 Mar. (77)	5 Thur.	251·1632		3819
21 Mar. (80)	2 Mon.	23	20	51	Mar. (66)	2 Mon.	126·8751		3820

TABLE

CONCURRENT YEAR.								
						JOVIAN SAṀVATSARA.		Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3821	642	777	126		719-20	51 Piṅgala . . .		5 Śrāvaṇa .
3822	643	778	127		*720-21	52 Kālayukta . . .		...
3823	644	779	128		721-22	53 Siddhārthin . . .		...
3824	645	780	129		722-23	54 Raudra . . .		2 Vaiśākha .
3825	646	781	130		723-24	55 Durmati . . .		...
3826	647	782	131		*724-25	56 Dundubhi . . .		10 Pausha .
3827	648	783	132		725-26	57 Rudhirōdgārin . .		...
3828	649	784	133		726-27	58 Raktāksha . . .		...
3829	650	785	134		727-28	59 Krōdhana . . .		7 Āśvina .
3830	651	786	135		*728-29	60 Kshaya . . .		...
3831	652	787	136		729-30	1 Prabhava . . .		...
3832	653	788	137		730-31	2 Vibhava . . .		3 Jyēshṭha .
3833	654	789	138		731-32	3 Śukla . . .		...
3834	655	790	139		*732-33	4 Pramōda . . .		12 Phālguna .
3835	656	791	140		733-34	5 Prajāpati† . . .		...
3836	657	792	141		734-35	7 *Śrīmukha* . . .		...
3837	658	793	142		735-36	8 *Bhāva* . . .		8 Kārttika .
3838	659	794	143		*736-37	9 *Yuvan* . . .		...
3839	660	795	144		737-38	10 *Dhātṛi* . . .		...
3840	661	796	145		738-39	11 *Īśvara* . . .		5 Śrāvaṇa .
3841	662	797	146		739-40	12 Bahudhānya . .		...
3842	663	798	147		*740-41	13 Pramāthin . . .		...
3843	664	799	148		741-42	14 Vikrama . . .		1 Chaitra .
3844	665	800	149		742-43	15 Vṛisha . . .		...
3845	666	801	150		743-44	16 Chitrabhānu . .		10 Pausha .

† No. 6 Aṅgiras was suppressed according to the mean system. By the *Brahma-Siddhānta* "true" system K.Y. 3836, A.D. 734-735, was called Aṅgiras, 7 Śrīmukha being suppressed. K.Y. 3837, A.D. 735-36, was 8 Bhāva by both systems.

XC—*contd.*

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.				MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mesha-saṁkrānti.		Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17		19	20	23	1
		H. M.	S.				
22 Mar. (81) . .	4 Wed. .	5 33	0	24 Feb. (55) .	6 Fri. .	2·5979	3821
21 Mar. (81) . .	5 Thur. .	11 45	9	14 Mar. (74) .	5 Thur. .	37·2803	3822
21 Mar. (80) . .	6 Fri. .	17 57	18	4 Mar. (63) .	3 Tues. .	251·6352	3823
22 Mar. (81) . .	1 Sun. .	0 9	27	21 Feb. (52) .	0 Sat. .	127·3579	3824
22 Mar. (81) . .	2 Mon. .	6 21	36	12 Mar. (71) .	6 Fri. .	162·0403	3825
21 Mar. (81) . .	3 Tues. .	12 33	45	29 Feb. (60) .	3 Tues. .	37·7632	3826
21 Mar. (80) . .	4 Wed. .	18 45	54	19 Mar. (78) .	2 Mon. .	72·4457	3827
22 Mar. (81) . .	6 Fri. .	0 58	3	9 Mar. (68) .	0 Sat. .	286·8004	3828
22 Mar. (81) . .	0 Sat. .	7 10	12	26 Feb. (57) .	4 Wed. .	162·5233	3829
21 Mar. (81) . .	1 Sun. .	13 22	21	16 Mar. (76) .	3 Tues. .	197·2057	3830
21 Mar. (80) . .	2 Mon. .	19 34	30	5 Mar. (64) .	0 Sat. .	72·9284	3831
22 Mar. (81) . .	4 Wed. .	1 46	39	23 Feb. (54) .	5 Thur. .	287·2833	3832
22 Mar. (81) . .	5 Thur. .	7 58	48	14 Mar. (73) .	4 Wed. .	321·9657	3833
21 Mar. (81) . .	6 Fri. .	14 10	57	2 Mar. (62) .	1 Sun. .	197·6886	3834
21 Mar. (80) . .	0 Sat. .	20 23	6	21 Mar. (80) .	0 Sat. .	232·3709	3835
22 Mar. (81) . .	2 Mon. .	2 35	15	10 Mar. (69) .	4 Wed. .	108·0938	3836
22 Mar. (81) . .	3 Tues. .	8 47	24	28 Feb. (59) .	2 Mon. .	322·4486	3837
21 Mar. (81) . .	4 Wed. .	14 59	33	17 Mar. (77) .	0 Sat. .	18·4990	3838
21 Mar. (80) . .	5 Thur. .	21 11	42	7 Mar. (66) .	5 Thur. .	232·8538	3839
22 Mar. (81) . .	0 Sat. .	3 23	51	24 Feb. (55) .	2 Mon. .	108·5767	3840
22 Mar. (81) . .	1 Sun. .	9 36	0	15 Mar. (74) .	1 Sun. .	143·2591	3841
21 Mar. (81) . .	2 Mon. .	15 48	9	3 Mar. (63) .	5 Thur. .	18·9819	3842
21 Mar. (80) . .	3 Tues. .	22 0	18	21 Feb. (52) .	3 Tues. .	233·3367	3843
22 Mar. (81) . .	5 Thur. .	4 12	27	12 Mar. (71) .	2 Mon. .	268·0191	3844
22 Mar. (81) . .	6 Fri. .	10 24	36	1 Mar. (60) .	6 Fri. .	143·7420	3845

TABLE

CONCURRENT YEAR.								
						JOVIAN SAṀVATSARA.		Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3846	667	802	151		*744-45	17 Subhānu . . .		...
3847	668	803	152		745-46	18 Tāraṇa . . .		...
3848	669	804	153		746-47	19 Pārthiva . . .		6 Bhādrapada .
3849	670	805	154		747-48	20 Vyaya . . .		...
3850	671	806	155		*748-49	21 Sarvajit . . .		...
3851	672	807	156		749-50	22 Sarvadhārin . .		3 Jyēshṭha .
3852	673	808	157		750-51	23 Virōdhin . . .		...
3853	674	809	158		751-52	24 Vikṛita . . .		12 Phālguna .
3854	675	810	159		*752-53	25 Khara . . .		...
3855	676	811	160		753-54	26 Nandana . . .		...
3856	677	812	161		754-55	27 Vijaya . . .		8 Kārttika .
3857	678	813	162		755-56	28 Jaya		...
3858	679	814	163		*756-57	29 Manmatha . . .		...
3859	680	815	164		757-58	30 Durmukha . . .		5 Śrāvaṇa .
3860	681	816	165		758-59	31 Hēmalamba . .		...
3861	682	817	166		759-60	32 Vilamba . . .		...
3862	683	818	167		*760-61	33 Vikārin . . .		1 Chaitra .
3863	684	819	168		761-62	34 Śārvarin . . .		...
3864	685	820	169		762-63	35 Plava . . .		10 Pausha .
3965	686	821	170		763-64	36 Subhakṛit . . .		...
3866	687	822	171		*764-65	37 Śōbhana . . .		...
3867	688	823	172		765-66	38 Krōdhin . . .		6 Bhādrapada .
3868	689	824	173		766-67	39 Viśvāvasu . . .		...
3869	690	825	174		767-68	40 Parābhava . . .		...
3870	691	826	175		*768-69	41 Plavaṅga . . .		3 Jyēshṭha .

XC—*contd.*

COMMENCEMENT OF THE									Kali.
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).		
13	14	17			19	20	23		1
		H.	M.	S.					
21 Mar. (81)	0 Sat.	16	36	45	19 Mar. (79)	5 Thur.	178·4243		3846
21 Mar. (80)	1 Sun.	22	48	54	8 Mar. (67)	2 Mon.	54·1472		3847
22 Mar. (81)	3 Tues.	5	1	3	26 Feb. (57)	0 Sat.	268·5021		3848
22 Mar. (81)	4 Wed.	11	13	12	17 Mar. (76)	6 Fri.	303·1844		3849
21 Mar. (81)	5 Thur.	17	25	21	5 Mar. (65)	3 Tues.	178·9072		3850
21 Mar. (80)	6 Fri.	23	37	30	22 Feb. (53)	0 Sat.	54·6301		3851
22 Mar. (81)	1 Sun.	5	49	39	13 Mar. (72)	6 Fri.	89·3125		3852
22 Mar. (81)	2 Mon.	12	1	48	3 Mar. (62)	4 Wed.	303·6673		3853
21 Mar. (81)	3 Tues.	18	13	57	20 Mar. (80)	2 Mon.	9999·7177§		3854
22 Mar. (81)	5 Thur.	0	26	6	10 Mar. (69)	0 Sat.	214·0726		3855
22 Mar. (81)	6 Fri.	6	38	15	27 Feb. (58)	4 Wed.	89·7953		3856
22 Mar. (81)	0 Sat.	12	50	24	18 Mar. (77)	3 Tues.	124·4778		3857
21 Mar. (81)	1 Sun.	19	2	33	6 Mar. (66)	0 Sat.	0·2006		3858
22 Mar. (81)	3 Tues.	1	14	42	24 Feb. (55)	5 Thur.	214·5555		3859
22 Mar. (81)	4 Wed.	7	26	51	15 Mar. (74)	4 Wed.	249·2378		3860
22 Mar. (81)	5 Thur.	13	39	0	4 Mar. (63)	1 Sun.	124·9607		3861
21 Mar. (81)	6 Fri.	19	51	9	21 Feb. (52)	5 Thur.	0·6835		3862
22 Mar. (81)	1 Sun.	2	3	18	11 Mar. (70)	4 Wed.	35·3658		3863
22 Mar. (81)	2 Mon.	8	15	27	1 Mar. (60)	2 Mon.	249·7207		3864
22 Mar. (81)	3 Tues.	14	27	36	20 Mar. (79)	1 Sun.	284·4031		3865
21 Mar. (81)	4 Wed.	20	39	45	8 Mar. (68)	5 Thur.	160·1261		3866
22 Mar. (81)	6 Fri.	2	51	54	25 Feb. (56)	2 Mon.	35·8488		3867
22 Mar. (81)	0 Sat.	9	4	3	16 Mar. (75)	1 Sun.	70·5312		3868
22 Mar. (81)	1 Sun.	15	16	12	6 Mar. (65)	6 Fri.	284·8860		3869
21 Mar. (81)	2 Mon.	21	28	21	23 Feb. (54)	3 Tues.	160·6088		3870

§Chaitra *śukla* 1 was suppressed.

TABLE

CONCURRENT YEAR.						Jovian Saṁvatsara.		Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3871	692	827	176		769-70	42 Kīlaka . . .		...
3872	693	828	177		770-71	43 Saumya . . .		11 Māgha .
3873	694	829	178		771-72	44 Sādhāraṇa . . .		...
3874	695	830	179		*772-73	45 Virōdhakṛit . .		...
3875	696	831	180		773-74	46 Paridhāvin . . .		8 Kārttika .
3876	697	832	181		774-75	47 Pramādin . . .		...
3877	698	833	182		775-76	48 Ānanda . . .		...
3878	699	834	183		*776-77	49 Rākshasa . . .		4 Āshāḍha .
3879	700	835	184		777-78	50 Anala . . .		...
3880	701	836	185		778-79	51 Piṅgala . . .		...
3881	702	837	186		779-80	52 Kālayukta . . .		1 Chaitra .
3882	703	838	187		*780-81	53 Siddhārthin . . .		...
3883	704	839	188		781-82	54 Raudra . . .		9 Mārgaśira .
3884	705	840	189		782-83	55 Durmati . . .		...
3885	706	841	190		783-84	56 Dundubhi . . .		...
3886	707	842	191		*784-85	57 Rudhirōdgārin . .		6 Bhādrapada .
3887	708	843	192		785-86	58 Raktāksha . . .		...
3888	709	844	193		786-87	59 Krōdhana . . .		...
3889	710	845	194		787-88	60 Kshaya . . .		3 Jyēshṭha .
3890	711	846	195		*788-89	1 Prabhava . . .		...
3891	712	847	196		789-90	2 Vibhava . . .		11 Māgha .
3892	713	848	197		790-91	3 Śukla . . .		...
3893	714	849	198		791-92	4 Pramōda . . .		...
3894	715	850	199		*792-93	5 Prajāpati . . .		8 Kārttika .
3895	716	851	200		793-94	6 Aṅgiras . . .		...

XC—*contd.*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrânti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
22 Mar. (81)	4 Wed.	3 40 30	13 Mar. (72)	2 Mon.	195·2912	3871
22 Mar. (81)	5 Thur.	9 52 39	2 Mar. (61)	6 Fri.	71·0141	3872
22 Mar. (81)	6 Fri.	16 4 48	21 Mar. (80)	5 Thur.	105·6965	3873
21 Mar. (81)	0 Sat.	22 16 57	10 Mar. (70)	3 Tues.	320·0513	3874
22 Mar. (81)	2 Mon.	4 29 6	27 Feb. (58)	0 Sat.	195·7741	3875
22 Mar. (81)	3 Tues.	10 41 15	18 Mar. (77)	6 Fri.	230·4566	3876
22 Mar. (81)	4 Wed.	16 53 24	7 Mar. (66)	3 Tues.	106·1793	3877
21 Mar. (81)	5 Thur.	23 5 33	25 Feb. (56)	1 Sun.	320·5342	3878
22 Mar. (81)	0 Sat	5 17 42	14 Mar. (73)	6 Fri.	16·5846	3879
22 Mar. (81)	1 Sun.	11 29 51	4 Mar. (63)	4 Wed.	230·9395	3880
22 Mar. (81)	2 Mon.	17 42 0	21 Feb. (52)	1 Sun.	106·6622	3881
21 Mar. (81)	3 Tues.	23 54 9	11 Mar. (71)	0 Sat.	141·3446	3882
22 Mar. (81)	5 Thur.	6 6 18	28 Feb. (59)	4 Wed.	17·0675	3883
22 Mar. (81)	6 Fri.	12 18 27	19 Mar. (78)	3 Tues.	51·7499	3884
22 Mar. (81)	0 Sat.	18 30 36	9 Mar. (68)	1 Sun.	266·1047	3885
22 Mar. (82)	2 Mon.	0 42 45	26 Feb. (57)	5 Thur.	141·8276	3886
22 Mar. (81)	3 Tues.	6 54 54	16 Mar. (75)	4 Wed.	176·5100	3887
22 Mar. (81)	4 Wed.	13 7 3	5 Mar. (64)	1 Sun.	52·2327	3888
22 Mar. (81)	5 Thur.	19 19 12	23 Feb. (54)	6 Fri.	266·5876	3889
22 Mar. (82)	0 Sat.	1 31 21	13 Mar. (73)	5 Thur.	301·2700	3890
22 Mar. (81)	1 Sun.	7 43 30	2 Mar. (61)	2 Mon.	176·9929	3891
22 Mar. (81)	2 Mon.	13 55 39	21 Mar. (80)	1 Sun.	211·6752	3892
22 Mar. (81)	3 Tues.	20 7 48	10 Mar. (69)	5 Thur.	87·3981	3893
22 Mar. (82)	5 Thur.	2 19 57	28 Feb. (59)	3 Tues.	301·7530	3894
22 Mar. (81)	6 Fri.	8 32 6	17 Mar. (76)	1 Sun.	9997·8033 §	3895

§ Chaitra *śukla* 1 was suppressed.

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3a	4	5	6	7	8a
3896	717	852	201		794-95	7 Śrīmukha . . .		...
3897	718	853	202		795-96	8 Bhāva . . .		4 Āshāḍha .
3898	719	854	203		*796-97	9 Yuvan . . .		...
3899	720	855	204		797-98	10 Dhātṛi . . .		...
3900	721	856	205		798-99	11 Īśvara . . .		1 Chaitra .
3901	722	857	206		799-800	12 Bahudhānya . .		...
3902	723	858	207		*800-01	13 Pramāthin . . .		9 Mārgaśira .
3903	724	859	208		801-02	14 Vikrama . . .		...
3904	725	860	209		802-03	15 Vṛisha . . .		...
3905	726	861	210		803-04	16 Chitrabhānu . .		6 Bhādrapada .
3906	727	862	211		*804-05	17 Subhānu . . .		...
3907	728	863	212		805-06	18 Tāraṇa . . .		...
3908	729	864	213		806-07	19 Pārthiva . . .		2 Vaiśākha .
3909	730	865	214		807-08	20 Vyaya . . .		...
3910	731	866	215		*808-09	21 Sarvajit . . .		11 Māgha .
3911	732	867	216		809-10	22 Sarvadhārin . .		...
3912	733	868	217		810-11	23 Virōdhin . . .		...
3913	734	869	218		811-12	24 Vikṛita . . .		7 Āśvina .
3914	735	870	219		*812-13	25 Khara . . .		...
3915	736	871	220		813-14	26 Nandana . . .		...
3916	737	872	221		814-15	27 Vijaya . . .		4 Āshāḍha .
3917	738	873	222		815-16	28 Jaya		...
3918	739	874	223		*816-17	29 Manmatha . . .		12 Phālguna .
3919	740	875	224		817-18	30 Durmukha . . .		...
3920	741	876	225		818-19	31 Hēmalamba† . .		...

† 32 Vilamba was suppressed by mean reckoning. By *Brahma-Siddhānta* "true" reckoning the year K. Y. 3921, A.D. 819-20, was 32 "Vilamba," and 33 Vikārin was suppressed.

XC—*contd.*

COMMENCEMENT OF THE									Kali.
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).		
13	14	17			19	20	23		1
		H.	M.	S.					
22 Mar. (81)	0 Sat.	14	44	15	7 Mar. (66)	6 Fri.	212·1581		3896
22 Mar. (81)	1 Sun.	20	56	24	24 Feb. (55)	3 Tues.	87·8810		3897
22 Mar. (82)	3 Tues.	3	8	33	14 Mar. (74)	2 Mon.	122·5633		3898
22 Mar. (81)	4 Wed.	9	20	42	3 Mar. (62)	6 Fri.	9998·2862§		3899
22 Mar. (81)	5 Thur.	15	32	51	21 Feb. (52)	4 Wed.	212·6410		3900
22 Mar. (81)	6 Fri.	21	45	0	12 Mar. (71)	3 Tues.	247·3234		3901
22 Mar. (82)	1 Sun.	3	57	9	29 Feb. (60)	0 Sat.	123·0463		3902
22 Mar. (81)	2 Mon.	10	9	18	19 Mar. (78)	6 Fri.	157·7287		3903
22 Mar. (81)	3 Tues.	16	21	27	8 Mar. (67)	3 Tues.	33·4515		3904
22 Mar. (81)	4 Wed.	22	33	36	26 Feb. (57)	1 Sun.	247·8064		3905
22 Mar. (82)	6 Fri.	4	45	45	16 Mar. (76)	0 Sat.	282·4888		3906
22 Mar. (81)	0 Sat.	10	57	54	5 Mar. (64)	4 Wed.	158·2115		3907
22 Mar. (81)	1 Sun.	17	10	3	22 Feb. (53)	1 Sun.	33·9344		3908
22 Mar. (81)	2 Mon.	23	22	12	13 Mar. (72)	0 Sat.	68·6168		3909
22 Mar. (82)	4 Wed.	5	34	21	2 Mar. (62)	5 Thur.	282·9716		3910
22 Mar. (81)	5 Thur.	11	46	30	21 Mar. (80)	4 Wed.	317·6540		3911
22 Mar. (81)	6 Fri.	17	58	39	10 Mar. (69)	1 Sun.	193·3769		3912
23 Mar. (82)	1 Sun.	0	10	48	27 Feb. (58)	5 Thur.	69·0998		3913
22 Mar. (82)	2 Mon.	6	22	57	17 Mar. (77)	4 Wed.	103·7821		3914
22 Mar. (81)	3 Tues.	12	35	6	7 Mar. (66)	2 Mon.	318·1369		3915
22 Mar. (81)	4 Wed.	18	47	15	24 Feb. (55)	6 Fri.	193·8598		3916
23 Mar. (82)	6 Fri.	0	59	24	15 Mar. (74)	5 Thur.	228·5421		3917
22 Mar. (82)	0 Sat.	7	11	33	3 Mar. (63)	2 Mon.	104·2650		3918
22 Mar. (81)	1 Sun.	13	23	42	22 Mar. (81)	1 Sun.	138·9474		3919
22 Mar. (81)	2 Mon.	19	35	51	11 Mar. (70)	5 Thur.	14·6703		3920

§ Chaitra *śukla* 1 was suppressed.

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3a	4	5	6	7	8a
3921	742	877	226		819-20	33 *Vikārin*		9 Mārgaśira
3922	743	878	227		*820-21	34 *Śārvarin*		...
3923	744	879	228		821-22	35 *Plava*		...
3924	745	880	229		822-23	36 *Śubhakṛit*		6 Bhādrapada‡
3925	746	881	230		823-24	37 *Śōbhana*		...
3926	747	882	231		*824-25	38 Krōdhin		...
3927	748	883	232	0-1	825-26	39 Viśvāvasu		2 Vaiśākha
3928	749	884	233	1-2	826-27	40 Parābhava		...
3929	750	885	234	2-3	827-28	41 Plavaṅga		11 Māgha
3930	751	886	235	3-4	*828-29	42 Kīlaka		...
3931	752	887	236	4-5	829-30	43 Saumya		...
3932	753	888	237	5-6	830-31	44 Sādhāraṇa		7 Āśvina
3933	754	889	238	6-7	831-32	45 Virōdhakṛit		...
3934	755	890	239	7-8	*832-33	46 Paridhāvin		...
3935	756	891	240	8-9	833-34	47 Pramādin		4 Āshāḍha
3936	757	892	241	9-10	834-35	48 Ānanda		...
3937	758	893	242	10-11	835-36	49 Rākshasa		12 Phālguna
3938	759	894	243	11-12	*836-37	50 Anala		...
3939	760	895	244	12-13	837-38	51 Piṅgala		...
3940	761	896	245	13-14	838-39	52 Kālayukta		9 Mārgaśira
3941	762	897	246	14-15	839-40	53 Siddhārthin		...
3942	763	898	247	15-16	*840-41	54 Raudra		...
3943	764	899	248	16-17	841-42	55 Durmati		5 Śrāvaṇa
3944	765	900	249	17-18	842-43	56 Dundubhi		...
3945	766	901	250	18-19	843-44	57 Rudhirōdgārin		...

‡ See "Remarks," p. 215 above.

XC—*contd.*

COMMENCEMENT OF THE							Kali.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.		Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17		19	20	23	1
		H. M. S.					
23 Mar. (82)	4 Wed.	1 48 0		1 Mar. (60)	3 Tues.	229·0250	3921
22 Mar. (82)	5 Thur.	8 0 9		19 Mar. (79)	2 Mon.	263·7074	3922
22 Mar. (81)	6 Fri.	14 12 18		8 Mar. (67)	6 Fri.	139·4313	3923
22 Mar. (81)	0 Sat.	20 24 27		25 Feb. (56)	3 Tues.	15·1531	3924
23 Mar. (82)	2 Mon.	2 36 36		16 Mar. (75)	2 Mon.	49·8355	3925
22 Mar. (82)	3 Tues.	8 48 45		5 Mar. (65)	0 Sat.	264·1904	3926
22 Mar. (81)	4 Wed.	15 0 54		22 Feb. (53)	4 Wed.	139·9132	3927
22 Mar. (81)	5 Thur.	21 13 3		13 Mar. (72)	3 Tues.	174·5955	3928
23 Mar. (82)	0 Sat.	3 25 12		2 Mar. (61)	0 Sat.	50·3184	3929
22 Mar. (82)	1 Sun.	9 37 21		20 Mar. (80)	6 Fri.	85·0009	3930
22 Mar. (81)	2 Mon.	15 49 30		10 Mar. (69)	4 Wed.	299·3556	3931
22 Mar. (81)	3 Tues.	22 1 39		27 Feb. (58)	1 Sun.	175·0784	3932
23 Mar. (82)	5 Thur.	4 13 48		18 Mar. (77)	0 Sat.	209·7609	3933
22 Mar. (82)	6 Fri.	16 25 57		6 Mar. (66)	4 Wed.	85·4837	3934
22 Mar. (81)	0 Sat.	16 38 6		24 Feb. (55)	2 Mon.	299·8385	3935
22 Mar. (81)	1 Sun.	22 50 15		14 Mar. (73)	0 Sat.	9995·8889 §	3936
23 Mar. (82)	3 Tues.	5 2 24		4 Mar. (63)	5 Thur.	210·2438	3937
22 Mar. (82)	4 Wed.	11 14 33		22 Mar. (82)	4 Wed.	244·9262	3938
22 Mar. (81)	5 Thur.	17 26 42		11 Mar. (70)	1 Sun.	120·6400	3939
22 Mar. (81)	6 Fri.	23 38 51		28 Feb. (59)	5 Thur.	9996·3718 §	3940
23 Mar. (82)	1 Sun.	5 51 0		19 Mar. (78)	4 Wed.	31·0542	3941
22 Mar. (82)	2 Mon.	12 3 9		8 Mar. (68)	2 Mon.	245·4000	3942
22 Mar. (81)	3 Tues.	18 15 18		25 Feb. (56)	6 Fri.	121·1319	3943
23 Mar. (82)	5 Thur.	0 27 27		16 Mar. (75)	5 Thur.	155·8143	3944
23 Mar. (82)	6 Fri.	6 39 36		5 Mar. (64)	2 Mon	31·5372	3945

§ Chaitra *śukla* 1 was suppressed.

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	
1	2	3	3a	4	5	6	7	8a
3946	767	902	251	19-20	*844-45	58 Raktāksha		2 Vaiśākha
3947	768	903	252	20-21	845-46	59 Krōdhana		...
3948	769	904	253	21-22	846-47	60 Kshaya		10 Pausha
3949	770	905	254	22-23	847-48	1 Prabhava		...
3950	771	906	255	23-24	*848-49	2 Vibhava		...
3951	772	907	256	24-25	849-50	3 Śukla		7 Aśvina
3952	773	908	257	25-26	850-51	4 Pramōda		...
3953	774	909	258	26-27	851-52	5 Prajāpati		...
3954	775	910	259	27-28	*852-53	6 Aṅgiras		3 Jyēshṭha
3955	776	911	260	28-29	853-54	7 Śrīmukha		...
3956	777	912	261	29-30	854-55	8 Bhāva		12 Phālguna
3957	778	913	262	30-31	855-56	9 Yuvan		...
3958	779	914	263	31-32	*856-57	10 Dhātṛi		...
3959	780	915	264	32-33	857-58	11 Īśvara		8 Kārttika
3960	781	916	265	33-34	858-59	12 Bahudhānya		...
3961	782	917	266	34-35	859-60	13 Pramāthin		...
3962	783	918	267	35-36	*860-61	14 Vikrama		5 Srāvaṇa
3963	784	919	268	36-37	861-62	15 Vṛisha		...
3964	785	920	269	37-38	862-63	16 Chitrabhānu		...
3965	786	921	270	38-39	863-64	17 Subhānu		2 Vaiśākha
3966	787	922	271	39-40	*864-65	18 Tāraṇa		...
3967	788	923	272	40-41	865-66	19 Pārthiva		10 Pausha
3968	789	924	273	41-42	866-67	20 Vyaya		...
3969	790	925	274	42-43	867-68	21 Sarvajit		...
3970	791	926	275	43-44	*868-69	22 Sarvadhārin		7 Aśvina

XC—*contd.*

COMMENCEMENT OF THE							Kali.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrânti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).		
13	14	17	19	20	23		1
		H. M. S.					
22 Mar. (82)	0 Sat.	12 51 45	23 Feb. (54)	0 Sat.	245·8919		3946
22 Mar. (81)	1 Sun.	19 3 54	13 Mar. (76)	6 Fri.	280·5743		3947
23 Mar. (82)	3 Tues.	1 16 3	2 Mar. (61)	3 Tues.	156·2972		3948
23 Mar. (82)	4 Wed.	7 28 12	21 Mar. (80)	2 Mon.	190·9796		3949
22 Mar. (82)	5 Thur.	13 40 21	9 Mar. (69)	6 Fri.	66·7024		3950
22 Mar. (81)	6 Fri.	19 52 30	27 Feb. (58)	4 Wed.	281·0572		3951
23 Mar. (82)	1 Sun.	2 4 39	18 Mar. (77)	3 Tues.	315·7397		3952
23 Mar. (82)	2 Mon.	8 16 48	7 Mar. (66)	0 Sat.	191·4624		3953
22 Mar. (82)	3 Tues.	14 28 57	24 Feb. (55)	4 Wed.	67·1853		3954
22 Mar. (81)	4 Wed.	20 41 6	14 Mar. (73)	3 Tues.	101·8677		3955
23 Mar. (82)	6 Fri.	2 53 15	4 Mar. (63)	1 Sun.	316·2225		3956
23 Mar. (82)	0 Sat.	9 5 24	22 Mar. (81)	6 Fri.	12·2729		3957
22 Mar. (82)	1 Sun.	15 17 33	11 Mar. (71)	4 Wed.	226·6278		3958
22 Mar. (81)	2 Mon.	21 29 42	28 Feb. (59)	1 Sun.	102·3506		3959
23 Mar. (82)	4 Wed.	3 41 51	19 Mar. (78)	0 Sat.	137·0329		3960
23 Mar. (82)	5 Thur.	9 54 0	8 Mar. (67)	4 Wed.	12·7558		3961
22 Mar. (82)	6 Fri.	16 6 9	26 Feb. (57)	2 Mon.	227·1107		3962
22 Mar. (81)	0 Sat.	22 18 18	16 Mar. (75)	1 Sun.	261·7930		3963
23 Mar. (82)	2 Mon.	4 30 27	5 Mar. (64)	5 Thur.	137·5159		3964
23 Mar. (82)	3 Tues.	10 42 36	22 Feb. (53)	2 Mon.	13·2387		3965
22 Mar. (82)	4 Wed.	16 54 45	12 Mar. (72)	1 Sun.	47·9211		3966
22 Mar. (81)	5 Thur.	23 6 54	2 Mar. (61)	6 Fri.	262·2759		3967
23 Mar. (82)	0 Sat.	5 19 3	21 Mar. (80)	5 Thur.	296·9584		3968
23 Mar. (82)	1 Sun.	11 31 12	10 Mar. (69)	2 Mon.	172·6812		3969
22 Mar. (82)	2 Mon.	17 43 21	27 Feb. (58)	6 Fri.	48·4039		3970

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA.		Mean intercalated (*adhika*) lunar month.
						Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3971	792	927	276	44-45	869-70	23 Virōdhin . . .		...
3972	793	928	277	45-46	870-71	24 Vikṛita . . .		...
3973	794	929	278	46-47	871-72	25 Khara . . .		3 Jyēshṭha .
3974	795	930	279	47-48	*872-73	26 Nandana . . .		...
3975	796	931	280	48-49	873-74	27 Vijaya . . .		12 Phālguna .
3976	797	932	281	49-50	874-75	28 Jaya		...
3977	798	933	282	50-51	875-76	29 Manmatha . . .		...
3978	799	934	283	51-52	*876-77	30 Durmukha . . .		8 Kārttika .
3979	800	935	284	52-53	877-78	31 Hēmalamba . .		...
3980	801	936	285	53-54	878-79	32 Vilamba . . .		...
3981	802	937	286	54-55	879-80	33 Vikārin . . .		5 Śrāvaṇa .
3982	803	938	287	55-56	*880-81	34 Śārvajin . . .		...
3983	804	939	288	56-57	881-82	35 Plava . . .		...
3984	805	940	289	57-58	882-83	36 Śubhakṛit . . .		1 Chaitra .
3985	806	941	290	58-59	883-84	37 Śōbhana . . .		...
3986	807	942	291	59-60	*884-85	38 Krōdhin . . .		10 Pausha .
3987	808	943	292	60-61	885-86	39 Viśvāvasu . . .		...
3988	809	944	293	61-62	886-87	40 Parābhava . . .		...
3989	810	945	294	62-63	887-88	41 Plavaṅga . . .		6 Bhādrapada .
3990	811	946	295	63-64	*888-89	42 Kīlaka . . .		...
3991	812	947	296	64-65	889-90	43 Saumya . . .		...
3992	813	948	297	65-66	890-91	44 Sādhāraṇa . . .		3 Jyēshṭha .
3993	814	949	298	66-67	891-92	45 Virōdhakṛit . .		...
3994	815	950	299	67-68	*892-93	46 Paridhāvin . .		11 Māgha .
3995	816	951	300	68-69	893-94	47 Pramādin . . .		...

XC—*contd.*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
22 Mar. (81) . .	3 Tues. .	23 55 30	17 Mar. (76) .	5 Thur. .	83·0864	3971
23 Mar. (82) . .	5 Thur. .	6 7 39	7 Mar. (66) .	3 Tues. .	297·4412	3972
23 Mar. (82) . .	6 Fri. .	12 19 48	24 Feb. (55) .	0 Sat. .	173·1641	3973
22 Mar. (82) . .	0 Sat. .	18 31 57	14 Mar. (74) .	6 Fri. .	207·8464	3974
23 Mar. (82) . .	2 Mon. .	0 44 6	3 Mar. (62) .	3 Tues. .	83·5693	3975
23 Mar. (82) . .	3 Tues. .	6 56 15	22 Mar. (81) .	2 Mon. .	118·2517	3976
23 Mar. (82) . .	4 Wed. .	13 8 24	12 Mar. (71) .	0 Sat. .	332·6065	3977
22 Mar. (82) . .	5 Thur. .	19 20 33	29 Feb. (60) .	4 Wed. .	208·3293	3978
23 Mar. (82) . .	0 Sat. .	1 32 42	19 Mar. (78) .	3 Tues. .	243·0118	3979
23 Mar. (82) . .	1 Sun. .	7 44 51	8 Mar. (67) .	0 Sat. .	118·7346	3980
23 Mar. (82) . .	2 Mon. .	13 57 0	26 Feb. (57) .	5 Thur. .	333·0894	3981
22 Mar. (82) . .	3 Tues. .	20 9 9	15 Mar. (75) .	3 Tues. .	29·1398	3982
23 Mar. (82) . .	5 Thur. .	2 21 18	5 Mar. (64) .	1 Sun. .	243·4947	3983
23 Mar. (82) . .	6 Fri. .	8 33 27	22 Feb. (53) .	5 Thur. .	119·2175	3984
23 Mar. (82) . .	0 Sat. .	14 45 36	13 Mar. (72) .	4 Wed. .	153·8998	3985
22 Mar. (82) . .	1 Sun. .	20 57 45	1 Mar. (61) .	1 Sun. .	29·6227	3986
23 Mar. (82) . .	3 Tues. .	3 9 54	20 Mar. (79) .	0 Sat. .	64·3052	3987
23 Mar. (82) . .	4 Wed. .	9 22 3	10 Mar. (69) .	5 Thur. .	278·6599	3988
23 Mar. (82) . .	5 Thur. .	15 34 12	27 Feb. (58) .	2 Mon. .	154·3828	3989
22 Mar. (82) . .	6 Fri. .	21 46 21	17 Mar. (77) .	1 Sun. .	189·0652	3990
23 Mar. (82) . .	1 Sun. .	3 58 30	6 Mar. (65) .	5 Thur. .	64·7881	3991
23 Mar. (82) . .	2 Mon. .	10 10 39	24 Feb. (55) .	3 Tues. .	279·1428	3992
23 Mar. (82) . .	3 Tues. .	16 22 48	15 Mar. (74) .	2 Mon. .	313·8252	3993
22 Mar. (82) . .	4 Wed. .	22 34 57	3 Mar. (63) .	6 Fri. .	189·5481	3994
23 Mar. (82) . .	6 Fri. .	4 47 6	22 Mar. (81) .	5 Thur. .	224·2304	3995

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
3996	817	952	301	69-70	894-95	48 Ānanda		...
3997	818	953	302	70-71	895-96	49 Rākshasa . . .		8 Kārttika .
3998	819	954	303	71-72	*896-97	50 Anala . . .		...
3999	820	955	304	72-73	897-98	51 Piṅgala . . .		...
4000	821	956	305	73-74	898-99	52 Kālayukta . . .		5 Śrāvaṇa .
4001	822	957	306	74-75	899-900	53 Siddhārthin . .		...
4002	823	958	307	75-76	*900-01	54 Raudra . . .		...
4003	824	959	308	76-77	901-02	55 Durmati . . .		1 Chaitra .
4004	825	960	309	77-78	902-03	56 Dundubhi . . .		...
4005	826	961	310	78-79	903-04	57 Rudhirōdgārin† . .		10 Pausha .
4006	827	962	311	79-80	*904-05	58 Raktāksha .	59 *Krōdhana* .	...
4007	828	963	312	80-81	905-06	59 Krōdhana .	60 *Kshaya* . .	...
4008	829	964	313	81-82	906-07	60 Kshaya . .	1 *Prabhava* .	6 Bhādrapada .
4009	830	965	314	82-83	907-08	1 Prabhava .	2 *Vibhava* .	...
4010	831	966	315	83-84	*908-09	2 Vibhava .	3 *Śukla* . .	...
4011	832	967	316	84-85	909-10	3 Śukla . .	4 Pramōda .	3 Jyēshṭha .
4012	833	968	317	85-86	910-11	4 Pramōda .	5 Prajāpati .	...
4013	834	969	318	86-87	911-12	5 Prajāpati .	6 Aṅgiras . . .	11 Māgha .
4014	835	970	319	87-88	*912-13	6 Aṅgiras . .	7 Śrīmukha .	...
4015	836	971	320	88-89	913-14	7 Śrīmukha .	8 Bhāva . . .	...
4016	837	972	321	89-90	914-15	8 Bhāva . .	9 Yuvan . .	8 Kārttika .
4017	838	973	322	90-91	915-16	9 Yuvan . .	10 Dhātṛi . .	...
4018	839	974	323	91-92	*916-17	10 Dhātṛi . .	11 Īśvara . .	...
4019	840	975	324	92-93	917-18	11 Īśvara . .	12 Bahudhānya . .	4 Āshāḍha .
4020	841	976	325	93-94	918-19	12 Bahudhānya .	13 Pramāthin .	...

† 58 Raktāksha was suppressed in the north. By southern reckoning there was no suppression, and there has been none since. By *Brahma-Siddhānta* "true" reckoning K.Y. 4006, A.D. 904-05, was 58 Raktāksha, 59 Krōdhana being suppressed in the north.

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University Library, ditto.
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Secretariat Library, Calcutta.
Indian Museum, ditto.
University Library, ditto.
Sanskrit College Library, Calcutta.
Presidency College Library, ditto.
Asiatic Society of Bengal, ditto.
Secretariat Library, Allahabad.
University Library, ditto.
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Sanskrit College Library, Benares.
Secretariat Library, Lahore.
Museum Library, ditto.
University Library, ditto.
Oriental College Library, Lahore.
Secretariat Library, Nagpur.
Museum Library, ditto.
Secretariat Library, Rangoon.
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College Library, Dacca.
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Museum Library, Lucknow.
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Canning College Library, Lucknow.
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Government College Library, Lahore.
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Public Library, Delhi.
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XC—*contd.*

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.	
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).		
13	14	17	19	20	23	1	
		H. M. S.					
23 Mar. (82) . .	0 Sat. .	10 59 15	11 Mar. (70) .	2 Mon. .	99·9533	3996	
23 Mar. (82) . .	1 Sun. .	17 11 24	1 Mar. (60) .	0 Sat. .	314·3081	3997	
22 Mar. (82) . .	2 Mon. .	23 23 33	18 Mar. (78) .	5 Thur. .	10·3584	3998	
23 Mar. (82) . .	4 Wed. .	5 35 42	8 Mar. (67) .	3 Tues. .	224·7133	3999	
23 Mar. (82) . .	5 Thur. .	11 47 51	25 Feb. (56) .	0 Sat. .	100·4362	4000	
23 Mar. (82) . .	6 Fri. .	18 0 0	16 Mar. (75) .	6 Fri. .	135·1186	4001	
23 Mar. (83) . .	1 Sun. .	0 12 9	4 Mar. (64) .	3 Tues. .	10·8415	4002	
23 Mar. (82) . .	2 Mon. .	6 24 18	22 Feb. (53) .	1 Sun. .	225·4963	4003	
23 Mar. (82) . .	3 Tues. .	12 36 27	13 Mar. (72) .	0 Sat. .	259·8786	4004	
23 Mar. (82) . .	4 Wed. .	18 48 36	2 Mar. (61) .	4 Wed. .	135·6015	4005	
23 Mar. (83) . .	6 Fri. .	[illegible] 0 45	20 Mar. (80) .	3 Tues. .	170·2839	4006	
23 Mar. (82) . .	0 Sat. .	7 12 54	9 Mar. (68) .	0 Sat. .	46·0067	4007	
23 Mar. (82) . .	1 Sun. .	13 25 3	27 Feb. (58) .	5 Thur. .	260·3616	4008	
23 Mar. (82) . .	2 Mon. .	19 37 12	18 Mar. (77) .	4 Wed. .	295·0440	4009	
23 Mar. (83) . .	4 Wed. .	1 49 21	6 Mar. (66) .	1 Sun. .	170·7668	4010	
23 Mar. (82) . .	5 Thur. .	8 1 30	23 Feb. (54) .	5 Thur. .	46·4896	4011	
23 Mar. (82) . .	6 Fri. .	14 13 39	14 Mar. (73) .	4 Wed. .	81·1720	4012	
23 Mar. (82) . .	0 Sat. .	20 25 48	4 Mar. (63) .	2 Mon. .	295·5269	4013	
23 Mar. (83) . .	2 Mon. .	2 37 57	22 Mar. (82) .	1 Sun. .	330·[illegible]92	4014	
23 Mar. (82) . .	3 Tues. .	8 50 6	11 Mar. (70) .	5 Thur. .	205·9321	4015	
23 Mar. (82) . .	4 Wed. .	15 2 15	28 Feb. (59) .	2 Mon. .	81·6549	4016	
23 Mar. (82) . .	5 Thur. .	21 14 24	19 Mar. (78) .	1 Sun. .	116·3373	4017	
23 Mar. (83) . .	0 Sat. .	3 26 33	8 Mar. (68) .	6 Fri. .	330·6921	4018	
23 Mar. (82) . .	1 Sun. .	9 38 42	25 Feb. (56) .	3 Tues. .	206·4150	4019	
23 Mar. (82) . .	2 Mon. .	15 50 51	16 Mar. (75) .	2 Mon. .	241·0974	4020	

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	Mean intercalated (*adhika*) lunar month.
1	2	3	3a	4	5	6	7	8a
4021	842	977	326	94-95	919-20	13 Pramâthin .	14 Vikrama .	...
4022	843	978	327	95-96	*920-21	14 Vikrama .	15 Vṛisha . .	1 Chaitra .
4023	844	979	328	96-97	921-22	15 Vṛisha . .	16 Chitrabhânu .	...
4024	845	980	329	97-98	922-23	16 Chitrabhânu .	17 Subhânu .	9 Mârgaśira .
4025	846	981	330	98-99	923-24	17 Subhânu .	18 Târaṇa . .	...
4026	847	982	331	99-100	*924-25	18 Târaṇa . .	19 Pârthiva .	...
4027	848	983	332	100-01	925-26	19 Pârthiva .	20 Vyaya . .	6 Bhâdrapada .
4028	849	984	333	101-02	926-27	20 Vyaya . .	21 Sarvajit .	...
4029	850	985	334	102-03	927-28	21 Sarvajit . .	22 Sarvadhârin .	...
4030	851	986	335	103-04	*928-29	22 Sarvadhârin .	23 Virôdhin .	2 Vaiśâkha .
4031	852	987	336	104-05	929-30	23 Virôdhin .	24 Vikṛita . .	...
4032	853	988	337	105-06	930-31	24 Vikṛita . .	25 Khara . .	11 Mâgha .
4033	854	989	338	106-07	931-32	25 Khara . .	26 Nandana .	...
4034	855	990	339	107-08	*932-33	26 Nandana .	27 Vijaya . .	...
4035	856	991	340	108-09	933-34	27 Vijaya . .	28 Jaya . .	7 Âśvina .
4036	857	992	341	109-10	934-35	28 Jaya . .	29 Manmatha .	...
4037	858	993	342	110-11	935-36	29 Manmatha .	30 Durmukha .	...
4038	859	994	343	111-12	*936-37	30 Durmukha .	31 Hêmalamba .	4 Âshâḍha .
4039	860	995	344	112-13	937-38	31 Hêmalamba .	32 Vilamba . .	...
4040	861	996	345	113-14	938-39	32 Vilamba .	33 Vikârin . .	...
4041	862	997	346	114-15	939-40	33 Vikârin . .	34 Śârvarin .	1 Chaitra .
4042	863	998	347	115-16	*940-41	34 Śârvarin .	35 Plava . .	...
4043	864	999	348	116-17	941-42	35 Plava . .	36 Śubhakṛit .	9 Mârgaśira .
4044	865	1000	349	117-18	942-43	36 Śubhakṛit .	37 Śôbhana . .	...
4045	866	1001	350	118-19	943-44	37 Śôbhana . .	38 Krôdhin . .	...

XC—*contd.*

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17			19	20	23	1
		H.	M.	S				
23 Mar. (82)	3 Tues.	22	3	0	5 Mar. (64)	6 Fri.	116·8202	4021
23 Mar. (83)	5 Thur.	4	15	9	23 Feb. (54)	4 Wed.	331·1750	4022
23 Mar. (82)	6 Fri.	10	27	18	12 Mar. (71)	2 Mon.	27·2254	4023
23 Mar. (82)	0 Sat.	16	39	27	2 Mar. (61)	0 Sat.	211·5802	4024
23 Mar. (82)	1 Sun.	22	51	36	21 Mar. (80)	6 Fri.	276·2626	4025
23 Mar. (83)	3 Tues.	5	3	45	9 Mar. (69)	3 Tues.	151·9855	4026
23 Mar. (82)	4 Wed.	11	15	54	26 Feb. (57)	0 Sat.	27·7084	4027
23 Mar. (82)	5 Thur.	17	28	3	17 Mar. (76)	6 Fri.	62·3907	4028
23 Mar. (82)	6 Fri.	23	40	12	7 Mar. (66)	4 Wed.	276·7455	4029
23 Mar. (83)	1 Sun.	5	52	21	24 Feb. (55)	1 Sun.	152·4684	4030
23 Mar. (82)	2 Mon.	12	4	30	14 Mar. (73)	0 Sat.	187·1507	4031
23 Mar. (82)	3 Tues.	18	16	39	3 Mar. (62)	4 Wed.	62·8736	4032
24 Mar. (83)	5 Thur.	0	28	48	22 Mar. (81)	3 Tues.	97·5560	4033
23 Mar. (83)	6 Fri.	6	40	57	11 Mar. (71)	1 Sun.	311·9109	4034
23 Mar. (82)	0 Sat.	12	53	6	28 Feb. (59)	5 Thur.	187·6336	4035
23 Mar. (82)	1 Sun.	19	5	15	19 Mar. (78)	4 Wed.	222·3161	4036
24 Mar. (83)	3 Tues.	1	17	24	8 Mar. (67)	1 Sun.	98·0389	4037
23 Mar. (83)	4 Wed.	7	29	33	26 Feb. (57)	6 Fri.	312·3938	4038
23 Mar. (82)	5 Thur.	13	41	42	15 Mar. (74)	4 Wed.	8·4441	4039
23 Mar. (82)	6 Fri.	19	53	51	5 Mar. (64)	2 Mon.	222·7990	4040
24 Mar. (83)	1 Sun.	2	6	0	22 Feb. (53)	6 Fri.	98·5218	4041
23 Mar. (83)	2 Mon.	8	18	9	12 Mar. (72)	5 Thur.	133·2042	4042
23 Mar. (82)	3 Tues.	14	30	18	1 Mar. (60)	2 Mon.	8·9270	4043
23 Mar. (82)	4 Wed.	20	42	27	20 Mar. (79)	1 Sun.	43·6094	4044
24 Mar. (83)	6 Fri.	2	54	36	10 Mar. (69)	6 Fri.	257·9643	4045

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3 *a*	4	5	6	7	8*a*
4046	867	1002	351	119-20	*944-45	38 Krōdhin	39 Viśvāvasu	6 Bhādrapada
4047	868	1003	352	120-21	945-46	39 Viśvāvasu	40 Parābhava	...
4048	869	1004	353	121-22	946-47	40 Parābhava	41 Plavaṅga	...
4049	870	1005	354	122-23	947-48	41 Plavaṅga	42 Kīlaka	2 Vaiśākha
4050	871	1006	355	123-24	*948-49	42 Kīlaka	43 Saumya	...
4051	872	1007	356	124-25	949-50	43 Saumya	44 Sādhāraṇa	11 Māgha
4052	873	1008	357	125-26	950-51	44 Sādhāraṇa	45 Virōdhakṛit	...
4053	874	1009	358	126-27	951-52	45 Virōdhakṛit	46 Paridhāvin	...
4054	875	1010	359	127-28	*952-53	46 Paridhāvin	47 Pramādin	7 Āśvina
4055	876	1011	360	128-29	953-54	47 Pramādin	48 Ānanda	...
4056	877	1012	361	129-30	954-55	48 Ānanda	49 Rākshasa	...
4057	878	1013	362	130-31	955-56	49 Rākshasa	50 Anala	4 Āshāḍha
4058	879	1014	363	131-32	*956-57	50 Anala	51 Piṅgala	...
4059	880	1015	364	132-33	957-58	51 Piṅgala	52 Kālayukta	12 Phālguna
4060	881	1016	365	133-34	958-59	52 Kālayukta	53 Siddhārthin	...
4061	882	1017	366	134-35	959-60	53 Siddhārthin	54 Raudra	...
4062	883	1018	367	135-36	*960-61	54 Raudra	55 Durmati	9 Mārgaśira
4063	884	1019	368	136-37	961-62	55 Durmati	56 Dundubhi	...
4064	885	1020	369	137-38	962-63	56 Dundubhi	57 Rudhirōdgārin	...
4065	886	1021	370	138-39	963-64	57 Rudhirōdgārin	58 Raktāksha	5 Srāvaṇa
4066	887	1022	371	139-40	*964-65	58 Raktāksha	59 Krōdhana	...
4067	888	1023	372	140-41	965-66	59 Krōdhana	60 Kshaya	...
4068	889	1024	373	141-42	966-67	60 Kshaya	1 Prabhava	2 Vaiśākha
4069	890	1025	374	142-43	967-68	1 Prabhava	2 Vibhava	...
4070	891	1026	375	143-44	*968-69	2 Vibhava	3 Sukla	10 Pausha

XC—*contd.*

COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			
Day and month, A.D.	Week-day.	Time of mean Mesha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
23 Mar. (83)	0 Sat.	9 6 45	27 Feb. (58)	3 Tues.	133·6871	4046
23 Mar. (82)	1 Sun.	15 18 54	17 Mar. (76)	2 Mon.	168·3695	4047
23 Mar. (82)	2 Mon.	21 31 3	6 Mar. (65)	6 Fri.	44·0923	4048
24 Mar. (83)	4 Wed.	3 43 12	24 Feb. (55)	4 Wed.	258·4471	4049
23 Mar. (83)	5 Thur.	9 55 21	14 Mar. (74)	3 Tues.	293·1295	4050
23 Mar. (82)	6 Fri.	16 7 30	3 Mar. (62)	0 Sat.	168·8524	4051
23 Mar. (82)	0 Sat.	22 19 39	22 Mar. (81)	6 Fri.	203·5348	4052
24 Mar. (83)	2 Mon.	4 31 48	11 Mar. (70)	3 Tues.	79·2576	4053
23 Mar. (83)	3 Tues.	10 43 57	29 Feb. (60)	1 Sun.	293·6125	4054
23 Mar. (82)	4 Wed.	16 56 6	19 Mar. (78)	0 Sat.	328·2949	4055
23 Mar. (82)	5 Thur.	23 8 15	8 Mar. (67)	4 Wed.	204·0176	4056
24 Mar. (83)	0 Sat.	5 20 24	25 Feb. (56)	1 Sun.	79·7405	4057
23 Mar. (83)	1 Sun.	11 32 33	15 Mar. (75)	0 Sat.	114·4229	4058
23 Mar. (82)	2 Mon.	17 44 42	5 Mar. (64)	5 Thur.	328·7778	4059
23 Mar. (82)	3 Tues.	23 56 51	23 Mar. (82)	1 Sun.	24·8281	4060
24 Mar. (83)	5 Thur.	6 9 0	13 Mar. (72)	1 Sun.	239·1830	4061
23 Mar. (83)	6 Fri.	12 21 9	1 Mar. (61)	5 Thur.	114·9058	4062
23 Mar. (82)	0 Sat.	18 33 18	20 Mar. (79)	4 Wed.	149·5881	4063
24 Mar. (83)	2 Mon.	0 45 27	9 Mar. (68)	1 Sun.	25·3110	4064
24 Mar. (83)	3 Tues.	6 57 36	27 Feb. (58)	6 Fri.	239·6659	4065
23 Mar. (83)	4 Wed.	13 9 45	17 Mar. (77)	5 Thur.	274·3483	4066
23 Mar. (82)	5 Thur.	19 21 54	6 Mar. (65)	2 Mon.	150·0710	4067
24 Mar. (83)	0 Sat.	1 34 3	23 Feb. (54)	6 Fri.	25·7939	4068
24 Mar. (83)	1 Sun.	7 46 12	14 Mar. (73)	5 Thur.	60·4763	4069
23 Mar. (83)	2 Mon.	13 58 21	3 Mar. (63)	3 Tues.	274·8311	4070

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA.		
						Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4071	892	1027	376	144-45	969-70	3 Śukla . .	4 Pramôda .	...
4072	893	1028	377	145-46	970-71	4 Pramôda .	5 Prajâpati .	...
4073	894	1029	378	146-47	971-72	5 Prajâpati .	6 Aṅgiras . .	7 Âśvina .
4074	895	1030	379	147-48	*972-73	6 Aṅgiras . .	7 Śrîmukha .	...
4075	896	1031	380	148-49	973-74	7 Śrîmukha .	8 Bhâva . .	...
4076	897	1032	381	149-50	974-75	8 Bhâva . .	9 Yuvan . .	4 Âshâḍha .
4077	898	1033	382	150-51	975-76	9 Yuvan . .	10 Dhâtṛi . .	...
4078	899	1034	383	151-52	*976-77	10 Dhâtṛi . .	11 Îśvara . .	12 Phâlguna .
4079	900	1035	384	152-53	977-78	11 Îśvara . .	12 Bahudhânya .	...
4080	901	1036	385	153-54	978-79	12 Bahudhânya .	13 Pramâthin .	...
4081	902	1037	386	154-55	979-80	13 Pramâthin .	14 Vikrama .	9 Mârgaśira .
4082	903	1038	387	155-56	*980-81	14 Vikrama .	15 Vṛisha . .	...
4083	904	1039	388	156-57	981-82	15 Vṛisha . .	16 Chitrabhânu .	...
4084	905	1040	389	157-58	982-83	16 Chitrabhânu .	17 Subhânu .	5 Śrâvaṇa .
4085	906	1041	390	158-59	983-84	17 Subhânu .	18 Târaṇa . .	...
4086	907	1042	391	159-60	*984-85	18 Târaṇa . .	19 Pârthiva .	...
4087	908	1043	392	160-61	985-86	19 Pârthiva .	20 Vyaya . .	2 Vaiśâkha .
4088	909	1044	393	161-62	986-87	20 Vyaya . .	21 Sarvajit . .	...
4089	910	1045	394	162-63	987-88	21 Sarvajit . .	22 Sarvadhârin .	10 Pausha .
4090	911	1046	395	163-64	*988-89	22 Sarvadhârin .	23 Virôdhin .	...
4091	912	1047	396	164-65	989-90	23 Virôdhin .	24 Vikṛita † .	...
4092	913	1048	397	165-66	990-91	24 Vikṛita . .	26 *Nandana* .	7 Âśvina .
4093	914	1049	398	166-67	991-92	25 Khara . .	27 *Vijaya* . .	...
4094	915	1050	399	167-68	*992-93	26 Nandana . .	28 *Jaya* . .	...
4095	916	1051	400	168-69	993-94	27 Vijaya . .	29 *Manmatha* .	3 Jyêshṭha .

† 25 Khara was suppressed in the north by the *Brahma-Siddhânta* system, whether calculated by "true" or mean reckoning.

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COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17			19	20	23	1
		H.	M.	S.				
23 Mar. (82)	3 Tues.	20	10	30	22 Mar. (81)	2 Mon.	309·5135	4071
24 Mar. (83)	5 Thur.	2	22	39	11 Mar. (70)	6 Fri.	185·2364	4072
24 Mar. (83)	6 Fri.	8	34	48	28 Feb. (59)	3 Tues.	60·9593	4073
23 Mar. (83)	0 Sat.	14	46	57	18 Mar. (78)	2 Mon.	95·6416	4074
23 Mar. (82)	1 Sun.	20	59	6	8 Mar. (67)	0 Sat.	309·9964	4075
24 Mar. (83)	3 Tues.	3	11	15	25 Feb. (56)	4 Wed.	185·7193	4076
24 Mar. (83)	4 Wed.	9	23	24	16 Mar. (75)	3 Tues.	220·4016	4077
23 Mar. (83)	5 Thur.	15	35	33	4 Mar. (64)	0 Sat.	96·1245	4078
23 Mar. (82)	6 Fri.	21	47	42	23 Mar. (82)	6 Fri.	130·8069	4079
24 Mar. (83)	1 Sun.	3	59	51	12 Mar. (71)	3 Tues.	6·5298	4080
24 Mar. (83)	2 Mon.	10	12	0	2 Mar. (61)	1 Sun.	220·8845	4081
23 Mar. (83)	3 Tues.	16	24	9	20 Mar. (80)	0 Sat.	255·5669	4082
23 Mar. (82)	4 Wed.	22	36	18	9 Mar. (68)	4 Wed.	131·2898	4083
24 Mar. (83)	6 Fri.	4	48	27	26 Feb. (57)	1 Sun.	7·0127	4084
24 Mar. (83)	0 Sat.	11	0	36	17 Mar. (76)	0 Sat.	41·6950	4085
23 Mar. (83)	1 Sun.	17	12	45	6 Mar. (66)	5 Thur.	256·0499	4086
23 Mar. (82)	2 Mon.	23	24	54	23 Feb. (54)	2 Mon.	131·7727	4087
24 Mar. (83)	4 Wed.	5	37	3	14 Mar. (73)	1 Sun.	166·4550	4088
24 Mar. (83)	5 Thur.	11	49	12	3 Mar. (62)	5 Thur.	42·1779	4089
23 Mar. (83)	6 Fri.	18	1	21	21 Mar. (81)	4 Wed.	76·8603	4090
24 Mar. (83)	1 Sun.	0	13	30	11 Mar. (70)	2 Mon.	291·2152	4091
24 Mar. (83)	2 Mon.	6	25	39	28 Feb. (59)	6 Fri.	166·9398	4092
24 Mar. (83)	3 Tues.	12	37	48	19 Mar. (78)	5 Thur.	201·6204	4093
23 Mar. (83)	4 Wed.	18	49	57	7 Mar. (67)	2 Mon.	77·3432	4094
24 Mar. (83)	6 Fri.	1	2	6	25 Feb. (56)	0 Sat.	291·6980	4095

TABLE

CONCURRENT YEAR.								
Kali.	Saka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	Mean intercalated (*adhika*) lunar month.
1	2	3	3a	4	5	6	7	8a
4096	917	1052	401	169-70	994-95	28 Jaya . .	30 *Durmukha* .	...
4097	918	1053	402	170-71	995-96	29 Manmatha .	31 Hēmalamba .	12 Phālguna .
4098	919	1054	403	171-72	*996-97	30 Durmukha .	32 Vilamba .	...
4099	920	1055	404	172-73	997-98	31 Hēmalamba .	33 Vikārin . .	...
4100	921	1056	405	173-74	998-99	32 Vilamba .	34 Śārvarin . .	8 Kārttika .
4101	922	1057	406	174-75	999-1000	33 Vikārin . .	35 Plava . .	...
4102	923	1058	407	175-76	*1000-01	34 Śārvarin .	36 Śubhakṛit .	...
4103	924	1059	408	176-77	1001-02	35 Plava . .	37 Śōbhana .	5 Śrāvaṇa .
4104	925	1060	409	177-78	1002-03	36 Śubhakṛit .	38 Krōdhin .	...
4105	926	1061	410	178-79	1003-04	37 Śōbhana .	39 Viśvāvasu .	...
4106	927	1062	411	179-80	*1004-05	38 Krōdhin .	40 Parābhava .	1 Chaitra .
4107	928	1063	412	180-81	1005-06	39 Viśvāvasu .	41 Plavaṅga .	...
4108	929	1064	413	181-82	1006-07	40 Parābhava .	42 Kīlaka . .	10 Pausha .
4109	930	1065	414	182-83	1007-08	41 Plavaṅga .	43 Saumya .	... .
4110	931	1066	415	183-84	*1008-09	42 Kīlaka . .	44 Sādhāraṇa .	...
4111	932	1067	416	184-85	1009-10	43 Saumya . .	45 Virōdhakṛit .	7 Āśvina† .
4112	933	1068	417	185-86	1010-11	44 Sādhāraṇa .	46 Paridhāvin .	...
4113	934	1069	418	186-87	1011-12	45 Virōdhakṛit .	47 Pramādin .	...
4114	935	1070	419	187-88	*1012-13	46 Paridhāvin .	48 Ānanda . .	3 Jyēshṭha .
4115	936	1071	420	188-89	1013-14	47 Pramādin .	49 Rākshasa .	...
4116	937	1072	421	189-90	1014-15	48 Ānanda . .	50 Anala . .	12 Phālguna .
4117	938	1073	422	190-91	1015-16	49 Rākshasa .	51 Piṅgala . .	...
4118	939	1074	423	191-92	*1016-17	50 Anala . .	52 Kālayukta .	...
4119	940	1075	424	192-93	1017-18	51 Piṅgala . .	53 Siddhārthin .	8 Kārttika .
4120	941	1076	425	193-94	1018-19	52 Kālayukta .	54 Raudra . .	...

† See "Remarks," p. 215 above.

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COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
24 Mar. (83) . .	0 Sat. .	7 14 15	16 Mar. (75) .	6 Fri. .	326·3804	4096
24 Mar. (83) . .	1 Sun. .	13 26 24	5 Mar. (64) .	3 Tues. .	202·1033	4097
23 Mar. (83) . .	2 Mon. .	19 38 33	23 Mar. (83) .	2 Mon. .	236·7856	4098
24 Mar. (83) . .	4 Wed. .	1 50 42	12 Mar. (71) .	6 Fri. .	112·5685	4099
24 Mar. (83) . .	5 Thur. .	8 2 51	2 Mar. (61) .	4 Wed. .	326·8633	4100
24 Mar. (83) . .	6 Fri. .	14 15 0	20 Mar. (79) .	2 Mon. .	22·9136	4101
23 Mar. (83) . .	0 Sat. .	20 27 9	9 Mar. (69) .	0 Sat. .	237·2685	4102
24 Mar. (83) . .	2 Mon. .	2 39 18	26 Feb. (57) .	4 Wed. .	112·9914	4103
24 Mar. (83) . .	3 Tues. .	8 51 27	17 Mar. (76) .	3 Tues. .	147·6737	4104
24 Mar. (83) . .	4 Wed. .	15 3 36	6 Mar. (65) .	0 Sat. .	23·3966	4105
23 Mar. (83) . .	5 Thur. .	21 15 45	24 Feb. (55) .	5 Thur. .	237·7514	4106
24 Mar. (83) . .	0 Sat. .	3 27 54	14 Mar. (73) .	4 Wed. .	272·4338	4107
24 Mar. (83) . .	1 Sun. .	9 40 3	3 Mar. (62) .	1 Sun. .	148·1566	4108
24 Mar. (83) . .	2 Mon. .	15 52 12	22 Mar. (81) .	0 Sat. .	182·8390	4109
23 Mar. (83) . .	3 Tues. .	22 4 21	10 Mar. (70) .	4 Wed. .	58·5618	4110
24 Mar. (83) . .	5 Thur. .	4 16 30	28 Feb. (59) .	2 Mon. .	272·9167	4111
24 Mar. (83) . .	6 Fri. .	10 28 39	19 Mar. (78) .	1 Sun. .	307·5991	4112
24 Mar. (83) . .	0 Sat. .	16 40 48	8 Mar. (67) .	5 Thur. .	183·3219	4113
23 Mar. (83) . .	1 Sun. .	22 52 57	25 Feb. (56) .	2 Mon. .	59·0447	4114
24 Mar. (83) . .	3 Tues. .	5 5 6	15 Mar. (74) .	1 Sun. .	93·7270	4115
24 Mar. (83) . .	4 Wed. .	11 17 15	5 Mar. (64) .	6 Fri. .	308·0820	4116
24 Mar. (83) . .	5 Thur. .	17 29 24	23 Mar. (82) .	4 Wed. .	4·1323	4117
23 Mar. (83) . .	6 Fri. .	23 41 33	12 Mar. (72) .	2 Mon. .	218·4872	4118
24 Mar. (83) . .	1 Sun. .	5 53 42	1 Mar. (60) .	6 Fri. .	94·2100	4119
24 Mar. (83) . .	2 Mon. .	12 5 51	20 Mar. (79) .	5 Thur. .	128·8924	4120

TABLE

CONCURRENT YEAR.									
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	Mean intercalated (*adhika*) lunar month.
1	2	3	3a	4	5	6	7	8a
4121	942	1077	426	194-95	1019-20	53 Siddhārthin .	55 Durmati . .	...
4122	943	1078	427	195-96	*1020-21	54 Raudra . .	56 Dundubhi .	5 Śrāvaṇa .
4123	944	1079	428	196-97	1021-22	55 Durmati . .	57 Rudhirōdgārin .	...
4124	945	1080	429	197-98	1022-23	56 Dundubhi .	58 Raktāksha .	...
4125	946	1081	430	198-99	1023-24	57 Rudhirōdgārin .	59 Krōdhana .	1 Chaitra .
4126	947	1082	431	199-200	*1024-25	58 Raktāksha .	60 Kshaya . .	...
4127	948	1083	432	200-01	1025-26	59 Krōdhana .	1 Prabhava .	10 Pausha .
4128	949	1084	433	201-02	1026-27	60 Kshaya . .	2 Vibhava . .	...
4129	950	1085	434	202-03	1027-28	1 Prabhava .	3 Śukla . .	...
4130	951	1086	435	203-04	*1028-29	2 Vibhava .	4 Pramōda .	6 Bhādrapada .
4131	952	1087	436	204-05	1029-30	3 Śukla . .	5 Prajāpati .	...
4132	953	1088	437	205-06	1030-31	4 Pramōda .	6 Aṅgiras . .	...
4133	954	1089	438	206-07	1031-32	5 Prajāpati .	7 Śrīmukha .	3 Jyēshṭha .
4134	955	1090	439	207-08	*1032-33	6 Aṅgiras . .	8 Bhāva . .	...
4135	956	1091	440	208-09	1033-34	7 Śrīmukha .	9 Yuvan . .	11 Māgha .
4136	957	1092	441	209-10	1034-35	8 Bhāva . .	10 Dhātṛi . .	...
4137	958	1093	442	210-11	1035-36	9 Yuvan . .	11 Īśvara . .	...
4138	959	1094	443	211-12	*1036-37	10 Dhātṛi . .	12 Bahudhānya .	8 Kārttika .
4139	960	1095	444	212-13	1037-38	11 Īśvara . .	13 Pramāthin .	...
4140	961	1096	445	213-14	1038-39	12 Bahudhānya .	14 Vikrama .	...
4141	962	1097	446	214-15	1039-40	13 Pramāthin .	15 Vṛisha . .	4 Āshāḍha .
4142	963	1098	447	215-16	*1040-41	14 Vikrama . .	16 Chitrabhānu .	...
4143	964	1099	448	216-17	1041-42	15 Vṛisha . .	17 Subhānu .	...
4144	965	1100	449	217-18	1042-43	16 Chitrabhānu .	18 Tāraṇa . .	1 Chaitra .
4145	966	1101	450	218-19	1043-44	17 Subhānu .	19 Pārthiva .	...

XC—*contd.*

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.				MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.		Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17		19	20	23	1
		H. M.	S.				
24 Mar. (83) . .	3 Tues. .	18 18	0	9 Mar. (68) .	2 Mon. .	4·6131	4121
24 Mar. (84) . .	5 Thur. .	0 30	9	27 Feb. (58) .	0 Sat. .	218·9701	4122
24 Mar. (83) . .	6 Fri. .	6 42	18	17 Mar. (76) .	6 Fri. .	253·6525	4123
24 Mar. (83) . .	0 Sat. .	12 54	27	6 Mar. (65) .	3 Tues. .	129·3753	4124
24 Mar. (83) . .	1 Sun. .	19 6	36	23 Feb. (54) .	0 Sat. .	5·0981	4125
24 Mar. (84) . .	3 Tues. .	1 18	45	13 Mar. (73) .	6 Fri. .	89·7806	4126
24 Mar. (83) . .	4 Wed. .	7 30	54	3 Mar. (62) .	4 Wed. .	254·1354	4127
24 Mar. (83) . .	5 Thur. .	13 43	3	22 Mar. (81) .	3 Tues. .	288·8177	4128
24 Mar. (83) . .	6 Fri. .	19 55	12	11 Mar. (70) .	0 Sat. .	164·5406	4129
24 Mar. (84) . .	1 Sun. .	2 7	21	28 Feb. (59) .	4 Wed. .	40·2635	4130
24 Mar. (83) . .	2 Mon. .	8 19	30	18 Mar. (77) .	3 Tues. .	74·9458	4131
24 Mar. (83) . .	3 Tues. .	14 31	39	8 Mar. (67) .	1 Sun. .	289·3006	4132
24 Mar. (83) . .	4 Wed. .	20 43	48	25 Feb. (56) .	5 Thur. .	165·0235	4133
24 Mar. (84) . .	6 Fri. .	2 55	57	15 Mar. (75) .	4 Wed. .	199·7059	4134
24 Mar. (83) . .	0 Sat. .	9 8	6	4 Mar. (63) .	1 Sun. .	75·4287	4135
24 Mar. (83) . .	1 Sun. .	15 20	15	23 Mar. (82) .	0 Sat. .	110·1111	4136
24 Mar. (83) . .	2 Mon. .	21 32	24	13 Mar. (72) .	5 Thur. .	324·4060	4137
24 Mar. (84) . .	4 Wed. .	3 44	33	1 Mar. (61) .	2 Mon. .	200·1888	4138
24 Mar. (83) . .	5 Thur. .	9 56	42	20 Mar. (79) .	1 Sun. .	234·8712	4139
24 Mar. (83) . .	6 Fri. .	16 8	51	9 Mar. (68) .	5 Thur. .	110·5940	4140
24 Mar. (83) . .	0 Sat. .	22 21	0	27 Feb. (58) .	3 Tues. .	324·9489	4141
24 Mar. (84) . .	2 Mon. .	4 33	9	16 Mar. (76) .	1 Sun. .	20·9992	4142
24 Mar. (83) . .	3 Tues. .	10 45	18	6 Mar. (65) .	6 Fri. .	235·3541	4143
24 Mar. (83) . .	4 Wed. .	16 57	27	23 Feb. (54) .	3 Tues. .	111·0793	4144
24 Mar. (83) . .	5 Thur. .	23 9	36	14 Mar. (73) .	2 Mon. .	145·7593	4145

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
Kali.	Saka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	
1	2	3	3*a*	4	5	6	7	8a
4146	967	1102	451	219-20	*1044-45	18 Tāraṇa . .	20 Vyaya . .	9 Mārgaśira .
4147	968	1103	452	220-21	1045-46	19 Pārthiva .	21 Sarvajit .	...
4148	969	1104	453	221-22	1046-47	20 Vyaya . .	22 Sarvadhārin .	...
4149	970	1105	454	222-23	1047-48	21 Sarvajit . .	23 Virōdhin .	6 Bhādrapada .
4150	971	1106	455	223-24	*1048-49	22 Sarvadhārin .	24 Vikṛita . .	...
4151	972	1107	456	224-25	1049-50	23 Virōdhin .	25 Khara . .	...
4152	973	1108	457	225-26	1050-51	24 Vikṛita . .	26 Nandana .	3 Jyēshṭha .
4153	974	1109	458	226-27	1051-52	25 Khara . .	27 Vijaya . .	...
4154	975	1110	459	227-28	*1052-53	26 Nandana .	28 Jaya . .	11 Māgha .
4155	976	1111	460	228-29	1053-54	27 Vijaya . .	29 Manmatha .	...
4156	977	1112	461	229-30	1054-55	28 Jaya . .	30 Durmukha .	...
4157	978	1113	462	230-31	1055-56	29 Manmatha .	31 Hēmalamba .	8 Kārttika .
4158	979	1114	463	231-32	*1056-57	30 Durmukha .	32 Vilamba .	...
4159	980	1115	464	232-33	1057-58	31 Hēmalamba .	33 Vikārin . .	...
4160	981	1116	465	233-34	1058-59	32 Vilamba .	34 Śārvarin .	4 Āshāḍha .
4161	982	1117	466	234-35	1059-60	33 Vikārin . .	35 Plava . .	...
4162	983	1118	467	235-36	*1060-61	34 Śārvarin .	36 Śubhakṛit .	...
4163	984	1119	468	236-37	1061-62	35 Plava . .	37 Śōbhana .	1 Chaitra .
4164	985	1120	469	237-38	1062-63	36 Śubhakṛit .	38 Krōdhin .	...
4165	986	1121	470	238-39	1063-64	37 Śōbhana .	39 Viśvāvasu .	9 Mārgaśira .
4166	987	1122	471	239-40	*1064-65	38 Krōdhin .	40 Parābhava .	...
4167	988	1123	472	240-41	1065-66	39 Viśvāvasu .	41 Plavaṅga .	...
4168	989	1124	473	241-42	1066-67	40 Parābhava .	42 Kīlaka . .	6 Bhādrapada .
4169	990	1125	474	242-43	1067-68	41 Plavaṅga .	43 Saumya .	...
4170	991	1126	475	243-44	*1068-69	42 Kīlaka . .	44 Sādhāraṇa .	...

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COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17			19	20	23	1
		H.	M.	S.				
24 Mar. (84) . .	0 Sat. .	5	21	45	2 Mar. (62) .	6 Fri. .	21·4821	4146
24 Mar. (83) . .	1 Sun. .	11	33	54	21 Mar. (80) .	5 Thur. .	56·1645	4147
24 Mar. (83) . .	2 Mon. .	17	46	3	11 Mar. (70) .	3 Tues. .	270·5194	4148
24 Mar. (83) . .	3 Tues. .	23	58	12	28 Feb. (59) .	0 Sat. .	146·2422	4149
24 Mar. (84) . .	5 Thur. .	6	10	21	18 Mar. (78) .	6 Fri. .	180·9246	4150
24 Mar. (83) . .	6 Fri. .	12	22	30	7 Mar. (66) .	3 Tues. .	56·6475	4151
24 Mar. (83) . .	0 Sat. .	18	34	39	25 Feb. (56) .	1 Sun. .	271·0023	4152
25 Mar. (84) . .	2 Mon. .	0	46	48	16 Mar. (75) .	0 Sat. .	305·6846	4153
24 Mar. (84) . .	3 Tues. .	6	58	57	4 Mar. (64) .	4 Wed. .	181·4075	4154
24 Mar. (83) . .	4 Wed. .	13	11	6	23 Mar. (82) .	3 Tues. .	216·0899	4155
24 Mar. (83) . .	5 Thur. .	19	23	15	12 Mar. (71) .	0 Sat. .	91·8127	4156
25 Mar. (84) . .	0 Sat. .	1	35	24	2 Mar. (61) .	5 Thur. .	306·1675	4157
24 Mar. (84) . .	1 Sun. .	7	47	33	19 Mar. (79) .	3 Tues. .	2·2180	4158
24 Mar. (83) . .	2 Mon. .	13	59	42	9 Mar. (68) .	1 Sun. .	216·5728	4159
24 Mar. (83) . .	3 Tues. .	20	11	51	26 Feb. (57) .	5 Thur. .	92·2956	4160
25 Mar. (84) . .	5 Thur. .	2	24	0	17 Mar. (76) .	4 Wed. .	126·9780	4161
24 Mar. (84) . .	6 Fri. .	8	36	9	5 Mar. (65) .	1 Sun. .	2·7009	4162
24 Mar. (83) . .	0 Sat. .	14	48	18	23 Feb. (54) .	6 Fri. .	217·0556	4163
24 Mar. (83) . .	1 Sun. .	21	0	27	14 Mar. (73) .	5 Thur. .	251·7380	4164
25 Mar. (84) . .	3 Tues. .	3	12	36	3 Mar. (62) .	2 Mon. .	127·4609	4165
24 Mar. (84) . .	4 Wed. .	9	24	45	21 Mar. (81) .	1 Sun. .	162·1433	4166
24 Mar. (83) . .	5 Thur. .	15	36	54	10 Mar. (69) .	5 Thur. .	37·8661	4167
24 Mar. (83) . .	6 Fri. .	21	49	3	28 Feb. (59) .	3 Tues. .	252·2210	4168
25 Mar. (84) . .	1 Sun. .	4	1	12	19 Mar. (78) .	2 Mon. .	286·9054	4169
24 Mar. (84) . .	2 Mon. .	10	13	21	7 Mar. (67) .	6 Fri. .	162·6262	4170

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
						Jovian Saṁvatsara.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4171	992	1127	476	244-45	1069-70	43 Saumya . .	45 Virōdhakṛit .	2 Vaiśākha .
4172	993	1128	477	245-46	1070-71	44 Sādhāraṇa .	46 Paridhāvin .	...
4173	994	1129	478	246-47	1071-72	45 Virōdhakṛit .	47 Pramādin	11 Māgha .
4174	995	1130	479	247-48	*1072-73	46 Paridhāvin .	48 Ānanda . .	...
4175	996	1131	480	248-49	1073-74	47 Pramādin .	49 Rākshasa .	...
4176	997	1132	481	249-50	1074-75	48 Ānanda . .	50 Anala† . .	7 Āśvina .
4177	998	1133	482	250-51	1075-76	49 Rākshasa .	52 *Kālayukta* .	...
4178	999	1134	483	251-52	*1076-77	50 Anala . .	53 *Siddhārthin* .	...
4179	1000	1135	484	252-53	1077-78	51 Piṅgala . .	54 *Raudra* .	4 Āshāḍha .
4180	1001	1136	485	253-54	1078-79	52 Kālayukta .	55 *Durmati* .	...
4181	1002	1137	486	254-55	1079-80	53 Siddhārthin .	56 *Dundubhi* .	12 Phālguna .
4182	1003	1138	487	255-56	*1080-81	54 Raudra . .	57 Rudhirōdgārin .	...
4183	1004	1139	488	256-57	1081-82	55 Durmati .	58 Raktāksha .	...
4184	1005	1140	489	257-58	1082-83	56 Dundubhi .	59 Krōdhana .	9 Mārgaśira .
4185	1006	1141	490	258-59	1083-84	57 Rudhirōdgārin .	60 Kshaya .	...
4186	1007	1142	491	259-60	*1084-85	58 Raktāksha .	1 Prabhava .	...
4187	1008	1143	492	260-61	1085-86	59 Krōdhana .	2 Vibhava .	6 Bhādrapada .
4188	1009	1144	493	261-62	1086-87	60 Kshaya . .	3 Śukla . .	...
4189	1010	1145	494	262-63	1087-88	1 Prabhava .	4 Pramōda .	...
4190	1011	1146	495	263-64	*1088-89	2 Vibhava .	5 Prajāpati .	2 Vaiśākha .
4191	1012	1147	496	264-65	1089-90	3 Śukla . .	6 Aṅgiras . .	...
4192	1013	1148	497	265-66	1090-91	4 Pramōda .	7 Śrīmukha .	11 Māgha .
4193	1014	1149	498	266-67	1091-92	5 Prajāpati .	8 Bhāva . .	...
4194	1015	1150	499	267-68	*1092-93	6 Aṅgiras . .	9 Yuvan . .	...
4195	1016	1151	500	268-69	1093-94	7 Śrīmukha .	10 Dhātṛi . .	7 Āśvina .

† 51 Piṅgala was suppressed in the north, according to both "true" and mean systems, in *Brahma-Siddhānta* reckoning.

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COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17			19	20	23	1
		H.	M.	S.				
24 Mar. (83)	3 Tues.	16	25	30	24 Feb. (55)	3 Tues.	38·3490	4171
24 Mar. (83)	4 Wed.	22	37	39	15 Mar. (74)	2 Mon.	73·0314	4172
25 Mar. (84)	6 Fri.	4	49	48	5 Mar. (64)	0 Sat.	287·3863	4173
24 Mar. (84)	0 Sat.	11	1	57	23 Mar. (83)	6 Fri.	322·0686	4174
24 Mar. (83)	1 Sun.	17	14	6	12 Mar. (71)	3 Tues.	197·7915	4175
24 Mar. (83)	2 Mon.	23	26	15	1 Mar. (60)	0 Sat.	73·5143	4176
25 Mar. (84)	4 Wed.	5	38	24	20 Mar. (79)	6 Fri.	108·1967	4177
24 Mar. (84)	5 Thur.	11	50	33	9 Mar. (69)	4 Wed.	322 5515	4178
24 Mar. (83)	6 Fri.	18	2	42	26 Feb. (57)	1 Sun.	198·2744	4179
25 Mar. (84)	1 Sun.	0	14	51	17 Mar (76)	0 Sat.	232·9568	4180
25 Mar. (84)	2 Mon.	6	27	0	6 Mar. (65)	4 Wed.	108·6796	4181
24 Mar. (84)	3 Tues.	12	39	9	24 Mar. (84)	3 Tues.	143·3620	4182
24 Mar (83)	4 Wed.	18	51	18	13 Mar. (72)	0 Sat.	19·0848	4183
25 Mar. (84)	6 Fri.	1	3	27	3 Mar. (62)	5 Thur.	233·4397	4184
25 Mar. (84)	0 Sat.	7	15	36	22 Mar. (81)	4 Wed.	268·1220	4185
24 Mar. (84)	1 Sun.	13	27	45	10 Mar. (70)	1 Sun.	143·8449	4186
24 Mar. (83)	2 Mon.	19	39	54	27 Feb. (58)	5 Thur.	19·5678	4187
25 Mar. (84)	4 Wed.	1	52	3	18 Mar. (77)	4 Wed.	54·2501	4188
25 Mar. (84)	5 Thur.	8	4	12	8 Mar. (67)	2 Mon.	268·6050	4189
24 Mar. (84)	6 Fri.	14	16	21	25 Feb. (56)	6 Fri.	144·3278	4190
24 Mar. (83)	0 Sat.	20	28	30	15 Mar. (74)	5 Thur.	179·0102	4191
25 Mar. (84)	2 Mon.	2	40	39	4 Mar. (63)	2 Mon.	54·7330	4192
25 Mar. (84)	3 Tues.	8	52	48	23 Mar. (82)	1 Sun.	89·4154	4193
24 Mar. (84)	4 Wed.	15	4	57	12 Mar. (72)	6 Fri.	303·7703	4194
24 Mar. (83)	5 Thur.	21	17	6	1 Mar. (60)	3 Tues.	179·4930	4195

TABLE

CONCURRENT YEAR.						JOVIAN SAṀVATSARA.		Mean intercalated (*adhika*) lunar month.
Kali.	Saka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3*a*	4	5	6	7	8*a*
4196	1017	1152	501	269-70	1094-95	8 Bhāva . .	11 Īśvara . .	...
4197	1018	1153	502	270-71	1095-96	9 Yuvan . .	12 Bahudhānya .	...
4198	1019	1154	503	271-72	*1096-97	10 Dhātṛi . .	13 Pramāthin .	4 Āshāḍha .
4199	1020	1155	504	272-73	1097-98	11 Īśvara . .	14 Vikrama .	...
4200	1021	1156	505	273-74	1098-99	12 Bahudhānya .	15 Vṛisha . .	12 Phālguna .
4201	1022	1157	506	274-75	1099-1100	13 Pramāthin .	16 Chitrabhānu .	...
4202	1023	1158	507	275-76	*1100-01	14 Vikrama .	17 Subhānu .	...
4203	1024	1159	508	276-77	1101-02	15 Vṛisha . .	18 Tāraṇa . .	9 Mārgaśira .
4204	1025	1160	509	277-78	1102-03	16 Chitrabhānu .	19 Pārthiva .	...
4205	1026	1161	510	278-79	1103-04	17 Subhānu .	20 Vyaya . .	...
4206	1027	1162	511	279-80	*1104-05	18 Tāraṇa . .	21 Sarvajit . .	5 Śrāvaṇa .
4207	1028	1163	512	280-81	1105-06	19 Pārthiva .	22 Sarvadhārin .	...
4208	1029	1164	513	281-82	1106-07	20 Vyaya . .	23 Virōdhin .	...
4209	1030	1165	514	282-83	1107-08	21 Sarvajit . .	24 Vikṛita . .	2 Vaiśākha .
4210	1031	1166	515	283-84	*1108-09	22 Sarvadhārin .	25 Khara . .	...
4211	1032	1167	516	284-85	1109-10	23 Virōdhin .	26 Nandana .	10 Pausha .
4212	1033	1168	517	285-86	1110-11	24 Vikṛita . .	27 Vijaya . .	...
4213	1034	1169	518	286-87	1111-12	25 Khara . .	28 Jaya . .	...
4214	1035	1170	519	287-88	*1112-13	26 Nandana .	29 Manmatha .	7 Āśvina .
4215	1036	1171	520	288-89	1113-14	27 Vijaya . .	30 Durmukha .	...
4216	1037	1172	521	289-90	1114-15	28 Jaya . .	31 Hēmalamba .	...
4217	1038	1173	522	290-91	1115-16	29 Manmatha .	32 Vilamba .	3 Jyēshṭha .
4218	1039	1174	523	291-92	*1116-17	30 Durmukha .	33 Vikārin . .	...
4219	1040	1175	524	292-93	1117-18	31 Hēmalamba .	34 Śārvarin .	12 Phālguna .
4220	1041	1176	525	293-94	1118-19	32 Vilamba .	35 Plava . .	...

XC—*contd.*

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.				MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.		Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17		19	20	23	1
		H. M.	S.				
25 Mar. (84)	0 Sat.	3 29	15	20 Mar. (79)	2 Mon.	214·1755	4196
25 Mar. (84)	1 Sun.	9 41	24	9 Mar. (68)	6 Fri.	89·8983	4197
24 Mar. (84)	2 Mon.	15 53	33	27 Feb. (58)	4 Wed.	304·2531	4198
24 Mar. (83)	3 Tues.	22 5	42	16 Mar. (75)	2 Mon.	0·3035	4199
25 Mar. (84)	5 Thur.	4 17	51	6 Mar. (65)	0 Sat.	214·6584	4200
25 Mar. (84)	6 Fri.	10 30	0	25 Mar. (84)	6 Fri.	249·3408	4201
24 Mar. (84)	0 Sat.	16 42	9	13 Mar. (73)	3 Tues.	125·0637	4202
24 Mar. (83)	1 Sun.	22 54	18	2 Mar. (61)	0 Sat.	0·7865	4203
25 Mar. (84)	3 Tues.	5 6	27	21 Mar. (80)	6 Fri.	35·4689	4204
25 Mar. (84)	4 Wed.	11 18	36	11 Mar. (70)	4 Wed.	249·8237	4205
24 Mar. (84)	5 Thur.	17 30	45	28 Feb. (59)	1 Sun.	125·5466	4206
24 Mar. (83)	6 Fri.	23 42	54	18 Mar. (77)	0 Sat.	160·2289	4207
25 Mar. (84)	1 Sun.	5 55	3	7 Mar. (66)	4 Wed.	35·9518	4208
25 Mar. (84)	2 Mon.	12 7	12	25 Feb. (56)	2 Mon.	250·3066	4209
24 Mar. (84)	3 Tues.	18 19	21	15 Mar. (75)	1 Sun.	284·9889	4210
25 Mar. (84)	5 Thur.	0 31	30	4 Mar. (63)	5 Thur.	160·7118	4211
25 Mar. (84)	6 Fri.	6 43	39	23 Mar. (82)	4 Wed.	195·3942	4212
25 Mar. (84)	0 Sat.	12 55	48	12 Mar. (71)	1 Sun.	71·1171	4213
24 Mar. (84)	1 Sun.	19 7	57	1 Mar. (61)	6 Fri.	285·4718	4214
25 Mar. (84)	3 Tues.	1 20	6	20 Mar. (79)	5 Thur.	320·1543	4215
25 Mar. (84)	4 Wed.	7 32	15	9 Mar. (68)	2 Mon.	195·8771	4216
25 Mar. (84)	5 Thur.	13 44	24	26 Feb. (57)	6 Fri.	71·5999	4217
24 Mar. (84)	6 Fri.	19 56	33	16 Mar. (76)	5 Thur.	106·2823	4218
25 Mar. (84)	1 Sun.	2 8	42	6 Mar. (65)	3 Tues.	320·6372	4219
25 Mar. (84)	2 Mon.	8 20	51	24 Mar. (83)	1 Sun.	16·6876	4220

TABLE

CONCURRENT YEAR.								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	Mean intercalated (*adhika*) lunar month.
1	2	3	3*a*	4	5	6	7	8*a*
4221	1042	1177	526	294-95	1119-20	33 Vikārin	36 Śubhakṛit	...
4222	1043	1178	527	295-96	*1120-21	34 Śārvarin	37 Śōbhana	8 Kārttika
4223	1044	1179	528	296-97	1121-22	35 Plava	38 Krōdhin	...
4224	1045	1180	529	297-98	1122-23	36 Śubhakṛit	39 Viśvāvasu	...
4225	1046	1181	530	298-99	1123-24	37 Śōbhana	40 Parābhava	5 Śrāvaṇa
4226	1047	1182	531	299-300	*1124-25	38 Krōdhin	41 Plavaṅga	...
4227	1048	1183	532	300-01	1125-26	39 Viśvāvasu	42 Kīlaka	...
4228	1049	1184	533	301-02	1126-27	40 Parābhava	43 Saumya	2 Vaiśākha
4229	1050	1185	534	302-03	1127-28	41 Plavaṅga	44 Sādhāraṇa	...
4230	1051	1186	535	303-04	*1128-29	42 Kīlaka	45 Virōdhakṛit	10 Pausha
4231	1052	1187	536	304-05	1129-30	43 Saumya	46 Paridhāvin	...
4232	1053	1188	537	305-06	1130-31	44 Sādhāraṇa	47 Pramādin	...
4233	1054	1189	538	306-07	1131-32	45 Virōdhakṛit	48 Ānanda	7 Āśvina
4234	1055	1190	539	307-08	*1132-33	46 Paridhāvin	49 Rākshasa	...
4235	1056	1191	540	308-09	1133-34	47 Pramādin	50 Anala	...
4236	1057	1192	541	309-10	1134-35	48 Ānanda	51 Piṅgala	3 Jyēshṭha
4237	1058	1193	542	310-11	1135-36	49 Rākshasa	52 Kālayukta	...
4238	1059	1194	543	311-12	*1136-37	50 Anala	53 Siddhārthin	12 Phālguna
4239	1060	1195	544	312-13	1137-38	51 Piṅgala	54 Raudra	...
4240	1061	1196	545	313-14	1138-39	52 Kālayukta	55 Durmati	...
4241	1062	1197	546	314-15	1139-40	53 Siddhārthin	56 Dundubhi	8 Kārttika
4242	1063	1198	547	315-16	*1140-41	54 Raudra	57 Rudhirōdgārin	...
4243	1064	1199	548	316-17	1141-42	55 Durmati	58 Raktāksha	...
4244	1065	1200	549	317-18	1142-43	56 Dundubhi	59 Krōdhana	5 Śrāvaṇa
4245	1066	1201	550	318-19	1143-44	57 Rudhirōdgārin	60 Kshaya	...

XC—*contd.*

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17			19	20	23	1
		H.	M.	S.				
25 Mar. (84) . .	3 Tues. .	14	33	0	14 Mar. (73) .	6 Fri. .	231·0424	4221
24 Mar. (84) . .	4 Wed. .	20	45	9	2 Mar. (62) .	3 Tues. .	106·7652	4222
25 Mar. (84) . .	6 Fri. .	2	57	18	21 Mar. (80) .	2 Mon. .	141·4477	4223
25 Mar. (84) . .	0 Sat. .	9	9	27	10 Mar. (69) .	6 Fri. .	17·1704	4224
25 Mar. (84) . .	1 Sun. .	15	21	36	28 Feb. (59) .	4 Wed. .	231·5253	4225
24 Mar. (84) . .	2 Mon. .	21	33	45	18 Mar. (78) .	3 Tues. .	266·2077	4226
25 Mar. (84) . .	4 Wed. .	3	45	54	7 Mar. (66) .	0 Sat. .	141·9306	4227
25 Mar. (84) . .	5 Thurs. .	9	58	3	24 Feb. (55) .	4 Wed. .	17·6533	4228
25 Mar. (84) . .	6 Fri. .	16	10	12	15 Mar. (74) .	3 Tues. .	52·3357	4229
24 Mar. (84) . .	0 Sat. .	22	22	21	4 Mar. (64) .	1 Sun. .	266·6906	4230
25 Mar. (84) . .	2 Mon. .	4	34	30	23 Mar. (82) .	0 Sat. .	301·3729	4231
25 Mar. (84) . .	3 Tues. .	10	46	39	12 Mar. (71) .	4 Wed. .	177·0958	4232
25 Mar. (84) . .	4 Wed. .	16	58	48	1 Mar. (60) .	1 Sun. .	52·8186	4233
24 Mar. (84) . .	5 Thurs. .	23	10	57	19 Mar. (79) .	0 Sat. .	87·5011	4234
25 Mar. (84) . .	0 Sat. .	5	23	6	9 Mar. (68) .	5 Thurs. .	301·8558	4235
25 Mar. (84) . .	1 Sun. .	11	35	15	26 Feb. (57) .	2 Mon. .	177·5787	4236
25 Mar. (84) . .	2 Mon. .	17	47	24	17 Mar. (76) .	1 Sun. .	212·2611	4237
24 Mar. (84) . .	3 Tues. .	23	59	33	5 Mar. (65) .	5 Thurs. .	87·9840	4238
25 Mar. (84) . .	5 Thurs. .	6	11	42	24 Mar. (83) .	4 Wed. .	122·6663	4239
25 Mar. (84) . .	6 Fri. .	12	23	51	13 Mar. (72) .	1 Sun. .	9998·8892 §	4240
25 Mar. (84) . .	0 Sat. .	18	36	0	3 Mar. (62) .	6 Fri. .	212·7440	4241
25 Mar. (85) . .	2 Mon. .	0	48	9	21 Mar. (81) .	5 Thurs. .	247·4264	4242
25 Mar. (84) . .	3 Tues. .	7	0	18	10 Mar. (69) .	2 Mon. .	123·0492	4243
25 Mar. (84) . .	4 Wed. .	13	12	27	27 Feb. (58) .	6 Fri. .	9998·8721 §	4244
25 Mar. (84) . .	5 Thurs. .	19	24	36	18 Mar. (77) .	5 Thurs. .	33·5545	4245

§ Chaitra śukla 1 was suppressed.

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrâdi Vikrama.	Mēshâdi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3a	4	5	6	7	8a
4246	1067	1202	551	319-20	*1144-45	58 Raktāksha .	1 Prabhava .	...
4247	1068	1203	552	320-21	1145-46	59 Krōdhana .	2 Vibhava . .	1 Chaitra .
4248	1069	1204	553	321-22	1146-47	60 Kshaya . .	3 Śukla . .	...
4249	1070	1205	554	322-23	1147-48	1 Prabhava .	4 Pramōda . .	10 Pausha .
4250	1071	1206	555	323-24	*1148-49	2 Vibhava . .	5 Prajāpati .	...
4251	1072	1207	556	324-25	1149-50	3 Śukla . .	6 Aṅgiras . .	...
4252	1073	1208	557	325-26	1150-51	4 Pramōda .	7 Śrīmukha .	6 Bhādrapada .
4253	1074	1209	558	326-27	1151-52	5 Prajāpati .	8 Bhāva . .	...
4254	1075	1210	559	327-28	*1152-53	6 Aṅgiras . .	9 Yuvan . .	...
4255	1076	1211	560	328-29	1153-54	7 Śrīmukha .	10 Dhātṛi . .	3 Jyēshṭha .
4256	1077	1212	561	329-30	1154-55	8 Bhāva . .	11 Īśvara . .	...
4257	1078	1213	562	330-31	1155-56	9 Yuvan . .	12 Bahudhānya .	11 Māgha .
4258	1079	1214	563	331-32	*1156-57	10 Dhātṛi . .	13 Pramāthin .	...
4259	1080	1215	564	332-33	1157-58	11 Īśvara . .	14 Vikrama .	...
4260	1081	1216	565	333-34	1158-59	12 Bahudhānya .	15 Vṛisha . .	8 Kārttika .
4261	1082	1217	566	334-35	1159-60	13 Pramāthin .	16 Chitrabhānu† .	...
4262	1083	1218	567	335-36	*1160-61	14 Vikrama .	18 *Tāraṇa* . .	...
4263	1084	1219	568	336-37	1161-62	15 Vṛisha . .	19 *Pārthiva* .	5 Śrāvaṇa .
4264	1085	1220	569	337-38	1162-63	16 Chitrabhānu .	20 *Vyaya* . .	...
4265	1086	1221	570	338-39	1163-64	17 Subhānu .	21 *Sarvajit* . .	...
4266	1087	1222	571	339-40	*1164-65	18 Tāraṇa . .	22 *Sarvadhārin* .	1 Chaitra .
4267	1088	1223	572	340-41	1165-66	19 Pārthiva .	23 Virōdhin .	...
4268	1089	1224	573	341-42	1166-67	20 Vyaya . .	24 Vikṛita . .	10 Pausha .
4269	1090	1225	574	342-43	1167-68	21 Sarvajit . .	25 Khara . .	...
4270	1091	1226	575	343-44	*1168-69	22 Sarvadhārin .	26 Nandana .	...

† 17 Subhānu was suppressed in the north by the *Brahma-Siddhānta*, both in true and mean reckoning.

XC—*contd.*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrânti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
25 Mar. (85) . .	0 Sat. .	1 36 45	7 Mar. (67) .	3 Tues. .	247·9093	4246
25 Mar. (84) . .	1 Sun. .	7 48 54	24 Feb. (55) .	0 Sat. .	123·6321	4247
25 Mar. (84) . .	2 Mon. .	14 1 3	15 Mar. (74) .	6 Fri. .	158·3145	4248
25 Mar. (84) . .	3 Tues. .	20 13 12	4 Mar. (63) .	3 Tues. .	34·0373	4249
25 Mar. (85) . .	5 Thurs. .	2 25 21	22 Mar. (82) .	2 Mon. .	68·7197	4250
25 Mar. (84) . .	6 Fri. .	8 37 30	12 Mar. (71) .	0 Sat. .	283·0746	4251
25 Mar. (84) . .	0 Sat. .	14 49 39	1 Mar. (60) .	4 Wed. .	158·7974	4252
25 Mar. (84) . .	1 Sun. .	21 1 48	20 Mar. (79) .	3 Tues. .	193·4798	4253
25 Mar. (85) . .	3 Tues. .	3 13 57	8 Mar. (68) .	0 Sat. .	69·2026	4254
25 Mar. (84) . .	4 Wed. .	9 26 6	26 Feb. (57) .	5 Thur. .	283·5575	4255
25 Mar. (84) . .	5 Thur. .	15 38 15	17 Mar. (76) .	4 Wed. .	318·2398	4256
25 Mar. (84) . .	6 Fri. .	21 50 24	6 Mar. (65) .	1 Sun. .	193·9627	4257
25 Mar. (85) . .	1 Sun. .	4 2 33	24 Mar. (84) .	0 Sat. .	228·6451	4258
25 Mar. (84) . .	2 Mon. .	10 14 42	13 Mar. (72) .	4 Wed. .	104·3680	4259
25 Mar. (84) . .	3 Tues. .	16 26 51	3 Mar. (62) .	2 Mon. .	318·7227	4260
25 Mar. (84) . .	4 Wed. .	22 39 0	21 Mar. (80) .	0 Sat. .	14·7731	4261
25 Mar. (85) . .	6 Fri. .	4 51 9	10 Mar. (70) .	5 Thur. .	229·1280	4262
25 Mar. (84) . .	0 Sat. .	11 3 18	27 Feb. (58) .	2 Mon. .	104·8508	4263
25 Mar. (84) . .	1 Sun. .	17 15 27	18 Mar. (77) .	1 Sun. .	139·5332	4264
25 Mar. (84) . .	2 Mon. .	23 27 36	7 Mar. (66) .	5 Thur. .	15·2561	4265
25 Mar. (85) . .	4 Wed. .	5 39 45	25 Feb. (56) .	3 Tues. .	229·6109	4266
25 Mar. (84) . .	5 Thur. .	11 51 54	15 Mar. (74) .	2 Mon. .	264·2932	4267
25 Mar. (84) . .	6 Fri. .	18 4 3	4 Mar. (63) .	6 Fri. .	140·0161	4268
26 Mar. (85) . .	1 Sun. .	0 16 12	23 Mar. (82) .	5 Thur. .	174·6985	4269
25 Mar. (85) . .	2 Mon. .	6 28 21	11 Mar. (71) .	2 Mon. .	50·[illegible]3	4270

TABLE

CONCURRENT YEAR.						Jovian Saṁvatsara.		Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4271	1092	1227	576	344-45	1169-70	23 Virōdhin	27 Vijaya	6 Bhādrapada
4272	1093	1228	577	345-46	1170-71	24 Vikṛita	28 Jaya	...
4273	1094	1229	578	346-47	1171-72	25 Khara	29 Manmatha	...
4274	1095	1230	579	347-48	*1172-73	26 Nandana	30 Durmukha	3 Jyēshṭha
4275	1096	1231	580	348-49	1173-74	27 Vijaya	31 Hēmalamba	...
4276	1097	1232	581	349-50	1174-75	28 Jaya	32 Vilamba	11 Māgha
4277	1098	1233	582	350-51	1175-76	29 Manmatha	33 Vikārin	...
4278	1099	1234	583	351-52	*1176-77	30 Durmukha	34 Śārvarin	...
4279	1100	1235	584	352-53	1177-78	31 Hēmalamba	35 Plava	8 Kārttika
4280	1101	1236	585	353-54	1178-79	32 Vilamba	36 Śubhakṛit	...
4281	1102	1237	586	354-55	1179-80	33 Vikārin	37 Śōbhana	...
4282	1103	1238	587	355-56	*1180-81	34 Śārvarin	38 Krōdhin	4 Āshāḍha
4283	1104	1239	588	356-57	1181-82	35 Plava	39 Viśvāvasu	...
4284	1105	1240	589	357-58	1182-83	36 Śubhakṛit	40 Parābhava	...
4285	1106	1241	590	358-59	1183-84	37 Śōbhana	41 Plavaṅga	1 Chaitra
4286	1107	1242	591	359-60	*1184-85	38 Krōdhin	42 Kīlaka	...
4287	1108	1243	592	360-61	1185-86	39 Viśvāvasu	43 Saumya	9 Mārgaśira
4288	1109	1244	593	361-62	1186-87	40 Parābhava	44 Sādhāraṇa	...
4289	1110	1245	594	362-63	1187-88	41 Plavaṅga	45 Virōdhakṛit	...
4290	1111	1246	595	363-64	*1188-89	42 Kīlaka	46 Paridhāvin	6 Bhādrapada
4291	1112	1247	596	364-65	1189-90	43 Saumya	47 Pramādin	...
4292	1113	1248	597	365-66	1190-91	44 Sādhāraṇa	48 Ānanda	...
4293	1114	1249	598	366-67	1191-92	45 Virōdhakṛit	49 Rākshasa	2 Vaiśākha
4294	1115	1250	599	367-68	*1192-93	46 Paridhāvin	50 Anala	...
4295	1116	1251	600	368-69	1193-94	47 Pramādin	51 Piṅgala	11 Māgha

XC—*contd.*

COMMENCEMENT OF THE							Kali.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	a (here = t, the index of the tithi).		
13	14	17	19	20	23		1
		H. M. S.					
25 Mar. (84)	3 Tues.	12 40 30	1 Mar. (60)	0 Sat.	264·7762		4271
25 Mar. (84)	4 Wed.	18 52 39	20 Mar. (79)	6 Fri.	299·4586		4272
26 Mar. (85)	6 Fri.	1 4 48	9 Mar. (68)	3 Tues.	175·1815		4273
25 Mar. (85)	0 Sat.	7 16 57	26 Feb. (57)	0 Sat.	50·9042		4274
25 Mar. (84)	1 Sun.	13 29 6	16 Mar. (75)	6 Fri.	85·5866		4275
25 Mar. (84)	2 Mon.	19 41 15	6 Mar. (65)	4 Wed.	299·9415		4276
26 Mar. (85)	4 Wed.	1 53 24	24 Mar. (83)	2 Mon.	9995·9918 §		4277
25 Mar. (85)	5 Thur.	8 5 33	13 Mar. (73)	0 Sat.	210·3467		4278
25 Mar. (84)	6 Fri.	14 17 42	2 Mar. (61)	4 Wed.	86·0695		4279
25 Mar. (84)	0 Sat.	20 29 51	21 Mar. (80)	3 Tues.	120·7519		4280
26 Mar. (85)	2 Mon.	2 42 0	10 Mar. (69)	0 Sat.	9996·4747 §		4281
25 Mar. (85)	3 Tues.	8 54 9	28 Feb. (59)	5 Thur.	210·8296		4282
25 Mar. (84)	4 Wed.	15 6 18	18 Mar. (77)	4 Wed.	245·5120		4283
25 Mar. (84)	5 Thur.	21 18 27	7 Mar. (66)	1 Sun.	121·2349		4284
26 Mar. (85)	0 Sat.	3 30 36	24 Feb. (55)	5 Thur.	9996·9576 §		4285
25 Mar. (85)	1 Sun.	9 42 45	14 Mar. (74)	4 Wed.	31·6400		4286
25 Mar. (84)	2 Mon.	15 54 54	4 Mar. (63)	2 Mon.	245·9949		4287
25 Mar. (84)	3 Tues.	22 7 3	23 Mar. (82)	1 Sun.	280·6772		4288
26 Mar. (85)	5 Thur.	4 19 12	12 Mar. (71)	5 Thur.	156·4001		4289
25 Mar. (85)	6 Fri.	10 31 21	29 Feb. (60)	2 Mon.	32·1230		4290
25 Mar. (84)	0 Sat.	16 43 30	19 Mar. (78)	1 Sun.	66·8054		4291
25 Mar. (84)	1 Sun.	22 55 39	9 Mar. (68)	6 Fri.	281·1602		4292
26 Mar. (85)	3 Tues.	5 7 48	26 Feb. (57)	3 Tues.	156·8830		4293
25 Mar. (85)	4 Wed.	11 19 57	16 Mar. (76)	2 Mon.	191·5654		4294
25 Mar. (84)	5 Thur.	17 32 6	5 Mar. (64)	6 Fri.	67·2882		4295

§ Chaitra śukla 1 was suppressed.

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3a	4	5	6	7	8a
4296	1117	1252	601	369-70	1194-95	48 Ânanda . .	52 Kâlayukta .	...
4297	1118	1253	602	370-71	1195-96	49 Râkshasa .	53 Siddhârthin .	...
4298	1119	1254	603	371-72	*1196-97	50 Anala . .	54 Raudra .	8 Kârttika ‡ .
4299	1120	1255	604	372-73	1197-98	51 Piṅgala . .	55 Durmati .	...
4300	1121	1256	605	373-74	1198-99	52 Kâlayukta .	56 Dundubhi .	...
4301	1122	1257	606	374-75	1199-1200	53 Siddhârthin .	57 Rudhirôdgârin .	4 Âshâḍha .
4302	1123	1258	607	375-76	*1200-01	54 Raudra . .	58 Raktâksha .	...
4303	1124	1259	608	376-77	1201-02	55 Durmati .	59 Krôdhana .	...
4304	1125	1260	609	377-78	1202-03	56 Dundubhi .	60 Kshaya . .	1 Chaitra .
4305	1126	1261	610	378-79	1203-04	57 Rudhirôdgârin	1 Prabhava .	...
4306	1127	1262	611	379-80	*1204-05	58 Raktâksha .	2 Vibhava .	9 Mârgaśira .
4307	1128	1263	612	380-81	1205-06	59 Krôdhana .	3 Sukla . .	...
4308	1129	1264	613	381-82	1206-07	60 Kshaya . .	4 Pramôda .	...
4309	1130	1265	614	382-83	1207-08	1 Prabhava .	5 Prajâpati .	6 Bhâdrapada .
4310	1131	1266	615	383-84	*1208-09	2 Vibhava .	6 Aṅgiras . .	...
4311	1132	1267	616	384-85	1209-10	3 Śukla . .	7 Śrîmukha .	...
4312	1133	1268	617	385-86	1210-11	4 Pramôda .	8 Bhâva . .	2 Vaiśâkha .
4313	1134	1269	618	386-87	1211-12	5 Prajâpati .	9 Yuvan . .	...
4314	1135	1270	619	387-88	*1212-13	6 Aṅgiras . .	10 Dhâtṛi . .	11 Mâgha .
4315	1136	1271	620	388-89	1213-14	7 Śrîmukha .	11 Îśvara . .	...
4316	1137	1272	621	389-90	1214-15	8 Bhâva . .	12 Bahudhânya .	...
4317	1138	1273	622	390-91	1215-16	9 Yuvan . .	13 Pramâthin .	7 Âśvina .
4318	1139	1274	623	391-92	*1216-17	10 Dhâtṛi . .	14 Vikrama .	...
4319	1140	1275	624	392-93	1217-18	11 Îśvara . .	15 Vṛisha . .	...
4320	1141	1276	625	393-94	1218-19	12 Bahudhânya .	16 Chitrabhânu .	4 Âshâḍha .

‡ See "Remarks," p. 215 above.

XC—*contd.*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrânti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
25 Mar. (84)	6 Fri.	23 44 15	24 Mar. (83)	5 Thur.	101·9706	4296
26 Mar. (85)	1 Sun.	5 56 24	14 Mar. (73)	3 Tues.	316·3255	4297
25 Mar. (85)	2 Mon.	12 8 33	2 Mar. (62)	0 Sat.	192·0182	4298
25 Mar. (84)	3 Tues.	18 20 42	21 Mar. (80)	6 Fri.	226·7307	4299
26 Mar. (85)	5 Thur.	0 32 51	10 Mar. (69)	3 Tues.	102·4535	4300
26 Mar. (85)	6 Fri.	6 45 0	28 Feb. (59)	1 Sun.	316·8083	4301
25 Mar. (85)	0 Sat.	12 57 9	17 Mar. (77)	6 Fri.	12·8587	4302
25 Mar. (84)	1 Sun.	19 9 18	7 Mar. (66)	4 Wed.	227·2136	4303
26 Mar. (85)	3 Tues.	1 21 27	24 Feb. (55)	1 Sun.	102·9363	4304
26 Mar. (85)	4 Wed.	7 33 36	15 Mar. (74)	0 Sat.	137·6188	4305
25 Mar. (85)	5 Thur.	13 45 45	3 Mar. (63)	4 Wed.	13·3416	4306
25 Mar. (84)	6 Fri.	19 57 54	22 Mar. (81)	3 Tues.	48·0239	4307
26 Mar. (85)	1 Sun.	2 10 3	12 Mar. (71)	1 Sun.	262·3788	4308
26 Mar. (85)	2 Mon.	8 22 12	1 Mar. (60)	5 Thur.	138·1017	4309
25 Mar. (85)	3 Tues.	14 34 21	19 Mar. (79)	4 Wed.	172·7840	4310
25 Mar. (84)	4 Wed.	20 46 30	8 Mar. (67)	1 Sun.	48·5069	4311
26 Mar. (85)	6 Fri.	2 58 39	26 Feb. (57)	6 Fri.	262·8617	4312
26 Mar. (85)	0 Sat.	9 10 48	17 Mar. (76)	5 Thur.	297·5441	4313
25 Mar. (85)	1 Sun.	15 22 57	5 Mar. (65)	2 Mon.	173·2669	4314
25 Mar. (84)	2 Mon.	21 35 6	24 Mar. (83)	1 Sun.	207·9493	4315
26 Mar. (85)	4 Wed.	3 47 15	13 Mar. (72)	5 Thur.	83·6722	4316
26 Mar. (85)	5 Thur.	9 59 24	3 Mar. (62)	3 Tues.	298·0269	4317
25 Mar. (85)	6 Fri.	16 11 33	21 Mar. (81)	2 Mon.	332·7094	4318
25 Mar. (84)	0 Sat.	22 23 42	10 Mar. (69)	6 Fri.	208·4322	4319
26 Mar. (85)	2 Mon.	4 35 51	27 Feb. (58)	3 Tues.	84·1551	4320

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
						JOVIAN SAṀVATSARA.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3*a*	4	5	6	7	8*a*
4321	1142	1277	626	394-95	1219-20	13 Pramāthin	17 Subhānu	...
4322	1143	1278	627	395-96	*1220-21	14 Vikrama	18 Tāraṇa	12 Phālguna
4323	1144	1279	628	396-97	1221-22	15 Vṛisha	19 Pārthiva	...
4324	1145	1280	629	397-98	1222-23	16 Chitrabhānu	20 Vyaya	...
4325	1146	1281	630	398-99	1223-24	17 Subhānu	21 Sarvajit	9 Mārgaśira
4326	1147	1282	631	399-400	*1224-25	18 Tāraṇa	22 Sarvadhārin	...
4327	1148	1283	632	400-01	1225-26	19 Pārthiva	23 Virōdhin	...
4328	1149	1284	633	401-02	1226-27	20 Vyaya	24 Vikṛita	5 Śrāvaṇa
4329	1150	1285	634	402-03	1227-28	21 Sarvajit	25 Khara	...
4330	1151	1286	635	403-04	*1228-29	22 Sarvadhārin	26 Nandana	...
4331	1152	1287	636	404-05	1229-30	23 Virōdhin	27 Vijaya	2 Vaiśākha
4332	1153	1288	637	405-06	1230-31	24 Vikṛita	28 Jaya	...
4333	1154	1289	638	406-07	1231-32	25 Khara	29 Manmatha	10 Pausha
4334	1155	1290	639	407-08	*1232-33	26 Nandana	30 Durmukha	...
4335	1156	1291	640	408-09	1233-34	27 Vijaya	31 Hēmalamba	...
4336	1157	1292	641	409-10	1234-35	28 Jaya	32 Vilamba	7 Āśvina
4337	1158	1293	642	410-11	1235-36	29 Manmatha	33 Vikārin	...
4338	1159	1294	643	411-12	*1236-37	30 Durmukha	34 Śārvarin	...
4339	1160	1295	644	412-13	1237-38	31 Hēmalamba	35 Plava	4 Āshāḍha
4340	1161	1296	645	413-14	1238-39	32 Vilamba	36 Śubhakṛit	...
4341	1162	1297	646	414-15	1239-40	33 Vikārin	37 Śōbhana	12 Phālguna
4342	1163	1298	647	415-16	*1240-41	34 Śārvarin	38 Krōdhin	...
4343	1164	1299	648	416-17	1241-42	35 Plava	39 Viśvāvasu	...
4344	1165	1300	649	417-18	1242-43	36 Śubhakṛit	40 Parābhava	9 Mārgaśira
4345	1166	1301	650	418-19	1243-44	37 Śōbhana	41 Plavaṅga	...

XO—*contd.*

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
26 Mar. (85) . .	3 Tues. .	10 48 0	18 Mar. (77) .	2 Mon. .	118·8374	4321
25 Mar. (85) . .	4 Wed. .	17 0 9	7 Mar. (67) .	0 Sat. .	333·1923	4322
25 Mar. (84) . .	5 Thur. .	23 12 18	25 Mar. (84) .	5 Thur. .	29·2427	4323
26 Mar. (85) . .	0 Sat. .	5 24 27	15 Mar. (74) .	3 Tues. .	243·5975	4324
26 Mar. (85) . .	1 Sun. .	11 36 36	4 Mar. (63) .	0 Sat. .	119·3203	4325
25 Mar. (85) . .	2 Mon. .	17 48 45	22 Mar. (82) .	6 Fri. .	154·0027	4326
26 Mar. (85) . .	4 Wed. .	0 0 54	11 Mar. (70) .	3 Tues. .	29·7256	4327
26 Mar. (85) . .	5 Thur. .	6 13 3	1 Mar. (60) .	1 Sun. .	244·0804	4328
26 Mar. (85) . .	6 Fri. .	12 25 12	20 Mar. (79) .	0 Sat. .	278·7628	4329
25 Mar. (85) . .	0 Sat. .	18 37 21	8 Mar. (68) .	4 Wed. .	154·4857	4330
26 Mar. (85) . .	2 Mon. .	0 49 30	25 Feb. (56) .	1 Sun. .	30·2084	4331
26 Mar. (85) . .	3 Tues. .	7 1 39	16 Mar. (75) .	0 Sat. .	64·8908	4332
26 Mar. (85) . .	4 Wed. .	13 13 48	6 Mar. (65) .	5 Thur. .	279·2457	4333
25 Mar. (85) . .	5 Thur. .	19 25 57	24 Mar. (84) .	4 Wed. .	313·9281	4334
26 Mar. (85) . .	0 Sat. .	1 38 6	13 Mar. (72) .	1 Sun. .	189·6509	4335
26 Mar. (85) . .	1 Sun. .	7 50 15	2 Mar. (61) .	5 Thur. .	65·3738	4336
26 Mar. (85) . .	2 Mon. .	14 2 24	21 Mar. (80) .	4 Wed. .	100·0562	4337
25 Mar. (85) . .	3 Tues. .	20 14 33	10 Mar. (70) .	2 Mon. .	314·4110	4338
26 Mar. (85) . .	5 Thur. .	2 26 42	27 Feb. (58) .	6 Fri. .	190·1338	4339
26 Mar. (85) . .	6 Fri. .	8 38 51	18 Mar. (77) .	5 Thur. .	224·8162	4340
26 Mar. (85) . .	0 Sat. .	14 51 0	7 Mar. (66) .	2 Mon. .	100·5391	4341
25 Mar. (85) . .	1 Sun. .	21 3 9	25 Mar. (85) .	1 Sun. .	135·2214	4342
26 Mar. (85) . .	3 Tues. .	3 15 18	14 Mar. (73) .	5 Thur. .	10·9443	4343
26 Mar. (85) . .	4 Wed. .	9 27 27	4 Mar. (63) .	3 Tues. .	225·2091	4344
26 Mar. (85) . .	5 Thur. .	15 39 36	23 Mar. (82) .	2 Mon. .	259·9815	4345

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
						Jovian Saṁvatsara.		
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4346	1167	1302	651	419-20	*1244-45	38 Krōdhin .	42 Kīlaka† . .	...
4347	1168	1303	652	420-21	1245-46	39 Viśvāvasu .	44 *Sādhāraṇa* .	5 Śrāvaṇa .
4348	1169	1304	653	421-22	1246-47	40 Parābhava .	45 *Virōdhakṛit* .	...
4349	1170	1305	654	422-23	1247-48	41 Plavaṅga .	46 *Paridhāvin* .	...
4350	1171	1306	655	423-24	*1248-49	42 Kīlaka . .	47 *Pramādin* .	2 Vaiśākha .
4351	1172	1307	656	424-25	1249-50	43 Saumya . .	48 *Ānanda* .	...
4352	1173	1308	657	425-26	1250-51	44 Sādhāraṇa .	49 *Rākshasa* .	10 Pausha .
4353	1174	1309	658	426-27	1251-52	45 Virōdhakṛit .	50 Anala . .	...
4354	1175	1310	659	427-28	*1252-53	46 Paridhāvin .	51 Piṅgala .	...
4355	1176	1311	660	428-29	1253-54	47 Pramādin .	52 Kālayukta .	7 Āśvina .
4356	1177	1312	661	429-30	1254-55	48 Ānanda . .	53 Siddhārthin .	...
4357	1178	1313	662	430-31	1255-56	49 Rākshasa .	54 Raudra . .	...
4358	1179	1314	663	431-32	*1256-57	50 Anala . .	55 Durmati .	3 Jyēshṭha .
4359	1180	1315	664	432-33	1257-58	51 Piṅgala . .	56 Dundubhi .	...
4360	1181	1316	665	433-34	1258-59	52 Kālayukta .	57 Rudhirōdgārin	12 Phālguna .
4361	1182	1317	666	434-35	1259-60	53 Siddhārthin .	58 Raktāksha .	...
4362	1183	1318	667	435-36	*1260-61	54 Raudra . .	59 Krōdhana .	...
4363	1184	1319	668	436-37	1261-62	55 Durmati .	60 Kshaya . .	8 Kārttika .
4364	1185	1320	669	437-38	1262-63	56 Dundubhi .	1 Prabhava .	...
4365	1186	1321	670	438-39	1263-64	57 Rudhirōdgārin	2 Vibhava .	...
4366	1187	1322	671	439-40	*1264-65	58 Raktāksha .	3 Śukla . .	5 Śrāvaṇa .
4367	1188	1323	672	440-41	1265-66	59 Krōdhana .	4 Pramōda .	...
4368	1189	1324	673	441-42	1266-67	60 Kshaya .	5 Prajāpati .	...
4369	1190	1325	674	442-43	1267-68	1 Prabhava .	6 Aṅgiras . .	1 Chaitra .
4370	1191	1326	675	443-44	*1268-69	2 Vibhava .	7 Śrīmukha .	...

† 43 Saumya was suppressed in the north by the mean system. By the "true" system K.Y. 4346 (expired), A.D. 1245-46, was called "Saumya," 44 Sadhāraṇa being suppressed. The next year was 45 Virōdhakṛit by both systems of reckoning.

XC—*contd.*

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
25 Mar. (85)	6 Fri.	21 51 45	11 Mar. (71)	6 Fri.	135·7043	4346
26 Mar. (85)	1 Sun.	4 3 54	28 Feb. (59)	3 Tues.	11·4272	4347
26 Mar. (85)	2 Mon.	10 16 3	19 Mar. (78)	2 Mon.	46·1096	4348
26 Mar. (85)	3 Tues.	16 28 12	9 Mar. (68)	0 Sat.	260·4644	4349
25 Mar. (85)	4 Wed.	22 40 21	26 Feb. (57)	4 Wed.	186·1872	4350
26 Mar. (85)	6 Fri.	4 52 30	16 Mar. (75)	3 Tues.	170·8696	4351
26 Mar. (85)	0 Sat.	11 4 39	5 Mar. (64)	0 Sat.	46·5925	4352
26 Mar. (85)	1 Sun.	17 16 48	24 Mar. (83)	6 Fri.	81·2748	4353
25 Mar. (85)	2 Mon.	23 28 57	13 Mar. (73)	4 Wed.	295·3297	4354
26 Mar. (85)	4 Wed.	5 41 6	2 Mar. (61)	1 Sun.	171·3526	4355
26 Mar. (85)	5 Thur.	11 53 15	21 Mar. (80)	0 Sat.	206·0349	4356
26 Mar. (85)	6 Fri.	18 6 24	10 Mar. (69)	4 Wed.	81·7577	4357
26 Mar. (86)	1 Sun.	0 17 33	28 Feb. (59)	2 Mon.	296·1126	4358
26 Mar. (85)	2 Mon.	6 29 42	18 Mar. (77)	1 Sun.	330·7950	4359
26 Mar. (85)	3 Tues.	12 41 51	7 Mar. (66)	5 Thur.	206·5178	4360
26 Mar. (85)	4 Wed.	18 54 0	26 Mar. (85)	4 Wed.	241·2002	4361
26 Mar. (86)	6 Fri.	1 6 9	14 Mar. (74)	1 Sun.	116·9231	4362
26 Mar. (85)	0 Sat.	7 18 18	4 Mar. (63)	6 Fri.	331·2778	4363
26 Mar. (85)	1 Sun.	13 30 27	22 Mar. (81)	4 Wed.	27·3283	4364
26 Mar. (85)	2 Mon.	19 42 36	12 Mar. (71)	2 Mon.	241·6831	4365
26 Mar. (86)	4 Wed.	1 54 45	29 Feb. (60)	6 Fri.	117·4060	4366
26 Mar. (85)	5 Thur.	8 6 54	19 Mar. (78)	5 Thur.	152·0883	4367
26 Mar. (85)	6 Fri.	14 19 3	8 Mar. (67)	2 Mon.	27·8112	4368
26 Mar. (85)	0 Sat.	20 31 12	26 Feb. (57)	0 Sat.	242·1660	4369
26 Mar. (86)	2 Mon.	2 43 21	16 Mar. (76)	6 Fri.	276·8483	4370

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	JOVIAN SAṀVATSARA. Southern system.	JOVIAN SAṀVATSARA. Northern system.	
1	2	3	3a	4	5	6	7	8a
4371	1192	1327	676	444-45	1269-70	3 Śukla	8 Bhāva	10 Pausha
4372	1193	1328	677	445-46	1270-71	4 Pramōda	9 Yuvan	...
4373	1194	1329	678	446-47	1271-72	5 Prajāpati	10 Dhātṛi	...
4374	1195	1330	679	447-48	*1272-73	6 Aṅgiras	11 Īśvara	7 Āśvina
4375	1196	1331	680	448-49	1273-74	7 Śrīmukha	12 Bahudhānya	...
4376	1197	1332	681	449-50	1274-75	8 Bhāva	13 Pramāthin	...
4377	1198	1333	682	450-51	1275-76	9 Yuvan	14 Vikrama	3 Jyēshṭha
4378	1199	1334	683	451-52	*1276-77	10 Dhātṛi	15 Vṛisha	...
4379	1200	1335	684	452-53	1277-78	11 Īśvara	16 Chitrabhānu	12 Phālguna
4380	1201	1336	685	453-54	1278-79	12 Bahudhānya	17 Subhānu	...
4381	1202	1337	686	454-55	1279-80	13 Pramāthin	18 Tāraṇa	...
4382	1203	1338	687	455-56	*1280-81	14 Vikrama	19 Pārthiva	8 Kārttika
4383	1204	1339	688	456-57	1281-82	15 Vṛisha	20 Vyaya	...
4384	1205	1340	689	457-58	1282-83	16 Chitrabhānu	21 Sarvajit	...
4385	1206	1341	690	458-59	1283-84	17 Subhānu	22 Sarvadhārin	5 Śrāvaṇa
4386	1207	1342	691	459-60	*1284-85	18 Tāraṇa	23 Virōdhin	...
4387	1208	1343	692	460-61	1285-86	19 Pārthiva	24 Vikṛita	...
4388	1209	1344	693	461-62	1286-87	20 Vyaya	25 Khara	1 Chaitra
4389	1210	1345	694	462-63	1287-88	21 Sarvajit	26 Nandana	...
4390	1211	1346	695	463-64	*1288-89	22 Sarvadhārin	27 Vijaya	10 Pausha
4391	1212	1347	696	464-65	1289-90	23 Virōdhin	28 Jaya	...
4392	1213	1348	697	465-66	1290-91	24 Vikṛita	29 Manmatha	...
4393	1214	1349	698	466-67	1291-92	25 Khara	30 Durmukha	6 Bhādrapada
4394	1215	1350	699	467-68	*1292-93	26 Nandana	31 Hēmalamba	...
4395	1216	1351	700	468-69	1293-94	27 Vijaya	32 Vilamba	...

XC—*contd.*

COMMENCEMENT OF THE									Kali.
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).				
Day and month, A.D.	Week-day.	Time of mean Mêsha-saṁkrânti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).		
13	14	17			19	20	23		1
		H.	M.	S.					
26 Mar. (85)	3 Tues.	8	55	30	5 Mar. (64)	3 Tues.	152·5712		4371
26 Mar. (85)	4 Wed.	15	7	39	24 Mar. (83)	2 Mon.	187·2536		4372
26 Mar. (85)	5 Thur.	21	19	48	13 Mar. (72)	6 Fri.	62·9765		4373
26 Mar. (86)	0 Sat.	3	31	57	2 Mar. (62)	4 Wed.	277·3313		4374
26 Mar. (85)	1 Sun.	9	44	6	21 Mar. (80)	3 Tues.	312·0137		4375
26 Mar. (85)	2 Mon.	15	56	15	10 Mar. (69)	0 Sat.	187·7365		4376
26 Mar. (85)	3 Tues.	22	8	24	27 Feb. (58)	4 Wed.	63·4598		4377
26 Mar. (86)	5 Thur.	4	20	33	17 Mar. (77)	3 Tues.	98·1417		4378
26 Mar. (85)	6 Fri.	10	32	42	7 Mar. (66)	1 Sun.	312·4966		4379
26 Mar. (85)	0 Sat.	16	44	51	25 Mar. (84)	6 Fri.	8·5470		4380
26 Mar. (85)	1 Sun.	22	57	0	15 Mar. (74)	4 Wed.	222·9018		4381
26 Mar. (86)	3 Tues.	5	9	9	3 Mar. (63)	1 Sun.	98·6246		4382
26 Mar. (85)	4 Wed.	11	21	18	22 Mar. (81)	0 Sat.	133·3071		4383
26 Mar. (85)	5 Thur.	17	33	27	11 Mar. (70)	4 Wed.	9·0299		4384
26 Mar. (85)	6 Fri.	23	45	36	1 Mar. (60)	2 Mon.	223·3847		4385
26 Mar. (86)	1 Sun.	5	57	45	19 Mar. (79)	1 Sun.	258·0671		4386
26 Mar. (85)	2 Mon.	12	9	54	8 Mar. (67)	5 Thur.	133·7900		4387
26 Mar. (85)	3 Tues.	18	22	3	25 Feb. (56)	2 Mon.	9·5127		4388
27 Mar. (86)	5 Thur.	0	34	12	16 Mar. (75)	1 Sun.	44·1952		4389
26 Mar. (86)	6 Fri.	6	46	21	5 Mar. (65)	6 Fri.	258·5500		4390
26 Mar. (85)	0 Sat.	12	58	30	24 Mar. (83)	5 Thur.	293·2324		4391
26 Mar. (85)	1 Sun.	19	10	39	13 Mar. (72)	2 Mon.	168·9552		4392
27 Mar. (86)	3 Tues.	1	22	48	2 Mar. (61)	6 Fri.	44·6781		4393
26 Mar. (86)	4 Wed.	7	34	57	20 Mar. (80)	5 Thur.	79·3605		4394
26 Mar. (85)	5 Thur.	13	47	6	10 Mar. (69)	3 Tues.	203·7152		4395

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
						JOVIAN SAṀVATSARA.		
Kali.	Saka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4396	1217	1352	701	469-70	1294-95	28 Jaya . .	33 Vikārin .	3 Jyēshṭha .
4397	1218	1353	702	470-71	1295-96	29 Manmatha .	34 Śārvarin .	...
4398	1219	1354	703	471-72	*1296-97	30 Durmukha .	35 Plava . .	11 Māgha .
4399	1220	1355	704	472-73	1297-98	31 Hēmalamba .	36 Śubhakṛit .	...
4400	1221	1356	705	473-74	1298-99	32 Vilamba .	37 Śōbhana .	...
4401	1222	1357	706	474-75	1299-1300	33 Vikārin . .	38 Krōdhin .	8 Kārttika .
4402	1223	1358	707	475-76	*1300-01	34 Śārvarin .	39 Viśvāvasu .	...
4403	1224	1359	708	476-77	1301-02	35 Plava . .	40 Parābhava .	...
4404	1225	1360	709	477-78	1302-03	36 Śubhakṛit .	41 Plavaṅga .	4 Āshāḍha .
4405	1226	1361	710	478-79	1303-04	37 Śōbhana .	42 Kīlaka . .	...
4406	1227	1362	711	479-80	*1304-05	38 Krōdhin .	43 Saumya . .	...
4407	1228	1363	712	480-81	1305-06	39 Viśvāvasu .	44 Sādhāraṇa .	1 Chaitra .
4408	1229	1364	713	481-82	1306-07	40 Parābhava .	45 Virōdhakṛit .	...
4409	1230	1365	714	482-83	1307-08	41 Plavaṅga .	46 Paridhāvin .	10 Pausha ‡ .
4410	1231	1366	715	483-84	*1308-09	42 Kīlaka . .	47 Pramādin .	...
4411	1232	1367	716	484-85	1309-10	43 Saumya . .	48 Ānanda . .	...
4412	1233	1368	717	485-86	1310-11	44 Sādhāraṇa .	49 Rākshasa .	6 Bhādrapada .
4413	1234	1369	718	486-87	1311-12	45 Virōdhakṛit .	50 Anala . .	...
4414	1235	1370	719	487-88	*1312-13	46 Paridhāvin .	51 Piṅgala . .	...
4415	1236	1371	720	488-89	1313-14	47 Pramādin .	52 Kālayukta .	3 Jyēshṭha .
4416	1237	1372	721	489-90	1314-15	48 Ānanda . .	53 Siddhārthin .	...
4417	1238	1373	722	490-91	1315-16	49 Rākshasa .	54 Raudra . .	11 Māgha .
4418	1239	1374	723	491-92	*1316-17	50 Anala . .	55 Durmati .	...
4419	1240	1375	724	492-93	1317-18	51 Piṅgala . .	56 Dundubhi .	...
4420	1241	1376	725	493-94	1318-19	52 Kālayukta .	57 Rudhirōdgārin .	8 Kārttika .

‡ See "Remarks," p. 215, preceding this Table.

XC—*contd.*

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17			19	20	23	1
		H.	M.	S.				
26 Mar. (85)	6 Fri.	19	59	15	27 Feb. (58)	0 Sat.	169·4381	4396
27 Mar. (86)	1 Sun.	2	11	24	18 Mar. (77)	6 Fri.	204·1205	4397
26 Mar. (86)	2 Mon.	8	23	33	6 Mar. (66)	3 Tues.	79·8433	4398
26 Mar. (85)	3 Tues.	14	35	42	25 Mar. (84)	2 Mon.	114·5257	4399
26 Mar. (85)	4 Wed.	20	47	51	15 Mar. (74)	0 Sat.	328·8806	4400
27 Mar. (86)	6 Fri.	3	0	0	4 Mar. (63)	4 Wed.	204·6034	4401
26 Mar. (86)	0 Sat.	9	12	9	22 Mar. (82)	3 Tues.	239·2859	4402
26 Mar. (85)	1 Sun.	15	24	18	11 Mar. (70)	0 Sat.	115·0087	4403
26 Mar. (85)	2 Mon.	21	36	27	1 Mar. (60)	5 Thur.	329·3635	4404
27 Mar. (86)	4 Wed.	3	48	36	19 Mar. (78)	3 Tues.	25·4139	4405
26 Mar. (86)	5 Thur.	10	0	45	8 Mar. (68)	1 Sun.	239·7688	4406
26 Mar. (85)	6 Fri.	16	12	54	25 Feb. (56)	5 Thur.	115·4915	4407
26 Mar. (85)	0 Sat.	22	25	3	16 Mar. (75)	4 Wed.	150·1739	4408
27 Mar. (86)	2 Mon.	4	37	12	5 Mar. (64)	1 Sun.	25·8968	4409
26 Mar. (86)	3 Tues.	10	49	21	23 Mar. (83)	0 Sat.	60·5791	4410
26 Mar. (85)	4 Wed.	17	1	30	13 Mar. (72)	5 Thur.	274·9340	4411
26 Mar. (85)	5 Thur.	23	13	39	2 Mar. (61)	2 Mon.	150·6569	4412
27 Mar. (86)	0 Sat.	5	25	48	21 Mar. (80)	1 Sun.	185·3393	4413
26 Mar. (86)	1 Sun.	11	37	57	9 Mar. (69)	5 Thur.	61·0621	4414
26 Mar. (85)	2 Mon.	17	50	6	27 Feb. (58)	3 Tues.	275·4169	4415
27 Mar. (86)	4 Wed.	0	2	15	18 Mar. (77)	2 Mon.	310·0993	4416
27 Mar. (86)	5 Thur.	6	14	24	7 Mar. (66)	6 Fri.	185·8221	4417
26 Mar. (86)	6 Fri.	12	26	33	25 Mar. (85)	5 Thur.	220·5045	4418
26 Mar. (85)	0 Sat.	18	38	42	14 Mar. (73)	2 Mon.	96·2274	4419
27 Mar. (86)	2 Mon.	0	50	51	4 Mar. (63)	0 Sat.	310·5822	4420

TABLE

CONCURRENT YEAR.						JOVIAN SAṀVATSARA.		Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrâdi Vikrama.*	Mêshâdi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4421	1242	1377	726	494-95	1319-20	53 Siddhârthin .	58 Raktâksha .	...
4422	1243	1378	727	495-96	*1320-21	54 Raudra . .	59 Krôdhana .	...
4423	1244	1379	728	496-97	1321-22	55 Durmati .	60 Kshaya . .	4 Âshâḍha .
4424	1245	1380	729	497-98	1322-23	56 Dundubhi .	1 Prabhava .	...
4425	1246	1381	730	498-99	1323-24	57 Rudhirôdgârin .	2 Vibhava .	...
4426	1247	1382	731	499-500	*1324-25	58 Raktâksha .	3 Śukla . .	1 Chaitra .
4427	1248	1383	732	500-01	1325-26	59 Krôdhana .	4 Pramôda .	...
4428	1249	1384	733	501-02	1326-27	60 Kshaya . .	5 Prajâpati .	9 Mârgaśira .
4429	1250	1385	734	502-03	1327-28	1 Prabhava .	6 Aṅgiras . .	...
4430	1251	1386	735	503-04	*1328-29	2 Vibhava .	7 Śrîmukha .	...
4431	1252	1387	736	504-05	1329-30	3 Śukla . .	8 Bhâva† . .	6 Bhâdrapada .
4432	1253	1388	737	505-06	1330-31	4 Pramôda .	10 *Dhâtṛi* . .	...
4433	1254	1389	738	506-07	1331-32	5 Prajâpati .	11 *Îśvara* . .	...
4434	1255	1390	739	507-08	*1332-33	6 Aṅgiras . .	12 *Bahudhânya* .	2 Vaiśâkha .
4435	1256	1391	740	508-09	1333-34	7 Śrîmukha .	13 *Pramâthin* .	...
4436	1257	1392	741	509-10	1334-35	8 Bhâva . .	14 *Vikrama* .	11 Mâgha .
4437	1258	1393	742	510-11	1335-36	9 Yuvan . .	15 *Vṛisha* . .	...
4438	1259	1394	743	511-12	*1336-37	10 Dhâtṛi . .	16 Chitrabhânu .	...
4439	1260	1395	744	512-13	1337-38	11 Îśvara . .	17 Subhânu .	7 Âśvina .
4440	1261	1396	745	513-14	1338-39	12 Bahudhânya .	18 Târaṇa . .	...
4441	1262	1397	746	514-15	1339-40	13 Pramâthin .	19 Pârthiva . .	...
4442	1263	1398	747	515-16	*1340-41	14 Vikrama .	20 Vyaya . .	4 Âshâḍha .
4443	1264	1399	748	516-17	1341-42	15 Vṛisha . .	21 Sarvajit . .	...
4444	1265	1400	749	517-18	1342-43	16 Chitrabhânu .	22 Sarvadhârin .	12 Phâlguna .
4445	1266	1401	750	518-19	1343-44	17 Subhânu .	23 Virôdhin .	...

† 9 Yuvan was suppressed in the north by the mean system. By the "true" system K.Y. 4431 (expired), A.D. 1330-31, was called "Yuvan," and 10 Dhâtṛi was suppressed. The next year was 11 Îśvara by both systems.

XC—*contd.*

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (the ... *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
27 Mar. (86)	3 Tues.	7 3 0	22 Mar. (81)	5 Thur.	6·6326	4421
26 Mar. (86)	4 Wed.	13 15 9	11 Mar. (71)	3 Tues.	220·9874	4422
26 Mar. (85)	5 Thur.	19 27 18	28 Feb. (59)	0 Sat.	96·7103	4423
27 Mar. (86)	0 Sat.	1 39 27	19 Mar. (78)	6 Fri.	131·3926	4424
27 Mar. (86)	1 Sun.	7 51 36	8 Mar. (67)	3 Tues.	7·1155	4425
26 Mar. (86)	2 Mon.	14 3 45	26 Feb. (57)	1 Sun.	221·4703	4426
26 Mar. (85)	3 Tues.	20 15 54	16 Mar. (75)	0 Sat.	256·1527	4427
27 Mar. (86)	5 Thur.	2 28 3	5 Mar. (64)	4 Wed.	131·8755	4428
27 Mar. (86)	6 Fri.	8 40 12	24 Mar. (83)	3 Tues.	166·5579	4429
26 Mar. (86)	0 Sat.	14 52 21	12 Mar. (72)	0 Sat.	42·2808	4430
26 Mar. (85)	1 Sun.	21 4 30	2 Mar. (61)	5 Thur.	256·6356	4431
27 Mar. (86)	3 Tues.	3 16 39	21 Mar. (80)	4 Wed.	291·4180	4432
27 Mar. (86)	4 Wed.	9 28 48	10 Mar. (69)	1 Sun.	167·0409	4433
26 Mar. (86)	5 Thur.	15 40 57	27 Feb. (58)	5 Thur.	42·7637	4434
26 Mar. (85)	6 Fri.	21 53 6	17 Mar. (76)	4 Wed.	77·4460	4435
27 Mar. (86)	1 Sun.	4 5 15	7 Mar. (66)	2 Mon.	291·8009	4436
27 Mar. (86)	2 Mon.	10 17 24	25 Mar. (85)	1 Sun.	326·4833	4437
26 Mar. (86)	3 Tues.	16 29 33	14 Mar. (74)	5 Thur.	202·2062	4438
26 Mar. (85)	4 Wed.	22 41 42	3 Mar. (62)	2 Mon.	77·9289	4439
27 Mar. (86)	6 Fri.	4 53 51	22 Mar. (81)	1 Sun.	112·6114	4440
27 Mar. (86)	0 Sat.	11 6 0	12 Mar. (71)	6 Fri.	326·9662	4441
26 Mar. (86)	1 Sun.	17 18 9	29 Feb. (60)	3 Tues.	202·6890	4442
26 Mar. (85)	2 Mon.	23 30 18	19 Mar. (78)	2 Mon.	237·3714	4443
27 Mar. (86)	4 Wed.	5 42 27	8 Mar. (67)	6 Fri.	113·6943	4444
27 Mar. (86)	5 Thur.	11 54 36	27 Mar. (86)	5 Thur.	147·7767	4445

TABLE

CONCURRENT YEAR.						JOVIAN SAṀVATSARA.		Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4446	1267	1402	751	519-20	*1344-45	18 Tāraṇa . .	24 Vikṛita . .	...
4447	1268	1403	752	520-21	1345-46	19 Pārthiva . .	25 Khara . .	9 Mārgaśira .
4448	1269	1404	753	521-22	1346-47	20 Vyaya . .	26 Nandana . .	...
4449	1270	1405	754	522-23	1347-48	21 Sarvajit . .	27 Vijaya . .	...
4450	1271	1406	755	523-24	*1348-49	22 Sarvadhārin .	28 Jaya . .	6 Bhādrapada .
4451	1272	1407	756	524-25	1349-50	23 Virōdhin .	29 Manmatha .	...
4452	1273	1408	757	525-26	1350-51	24 Vikṛita . .	30 Durmukha .	...
4453	1274	1409	758	526-27	1351-52	25 Khara . .	31 Hēmalamba .	2 Vaiśākha .
4454	1275	1410	759	527-28	*1352-53	26 Nandana . .	32 Vilamba . .	...
4455	1276	1411	760	528-29	1353-54	27 Vijaya . .	33 Vikārin . .	11 Māgha .
4456	1277	1412	761	529-30	1354-55	28 Jaya . .	34 Śārvarin . .	...
4457	1278	1413	762	530-31	1355-56	29 Manmatha .	35 Plava . .	...
4458	1279	1414	763	531-32	*1356-57	30 Durmukha .	36 Śubhakṛit .	7 Āśvina .
4459	1280	1415	764	532-33	1357-58	31 Hēmalamba .	37 Śōbhana . .	...
4460	1281	1416	765	533-34	1358-59	32 Vilamba . .	38 Krōdhin . .	...
4461	1282	1417	766	534-35	1359-60	33 Vikārin . .	39 Viśvāvasu .	4 Āshāḍha .
4462	1283	1418	767	535-36	*1360-61	34 Śārvarin . .	40 Parābhava .	...
4463	1284	1419	768	536-37	1361-62	35 Plava . .	41 Plavaṅga .	12 Phālguna .
4464	1285	1420	769	537-38	1362-63	36 Śubhakṛit .	42 Kīlaka . .	...
4465	1286	1421	770	538-39	1363-64	37 Śōbhana . .	43 Saumya . .	...
4466	1287	1422	771	539-40	*1364-65	38 Krōdhin . .	44 Sādhāraṇa .	9 Mārgaśira .
4467	1288	1423	772	540-41	1365-66	39 Viśvāvasu .	45 Virōdhakṛit .	...
4468	1289	1424	773	541-42	1366-67	40 Parābhava .	46 Paridhāvin .	...
4469	1290	1425	774	542-43	1367-68	41 Plavaṅga .	47 Pramādin .	5 Śrāvaṇa .
4470	1291	1426	775	543-44	*1368-69	42 Kīlaka . .	48 Ānanda . .	...

XC—*contd.*

COMMENCEMENT OF THE							
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mêsha-samkrânti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
26 Mar. (86)	6 Fri.	18 6 45	15 Mar. (75)	2 Mon.	23·4995	4446
27 Mar. (86)	1 Sun.	0 18 54	5 Mar. (64)	0 Sat.	237·8543	4447
27 Mar. (86)	2 Mon.	6 31 3	24 Mar. (83)	6 Fri.	272·5367	4448
27 Mar. (86)	3 Tues.	12 43 12	13 Mar. (72)	3 Tues.	148·2595	4449
26 Mar. (86)	4 Wed.	18 55 21	1 Mar. (61)	0 Sat.	23·9824	4450
27 Mar. (86)	6 Fri.	1 7 30	20 Mar. (79)	6 Fri.	58·6648	4451
27 Mar. (86)	0 Sat.	7 19 39	10 Mar. (69)	4 Wed.	273·0197	4452
27 Mar. (86)	1 Sun.	13 31 48	27 Feb. (58)	1 Sun.	148·7424	4453
26 Mar. (86)	2 Mon.	19 43 57	17 Mar. (77)	0 Sat.	183·4248	4454
27 Mar. (86)	4 Wed.	1 56 6	6 Mar. (65)	4 Wed.	59·1477	4455
27 Mar. (86)	5 Thur.	8 8 15	25 Mar. (84)	3 Tues.	93·8300	4456
27 Mar. (86)	6 Fri.	14 20 24	15 Mar. (74)	1 Sun.	308·1849	4457
26 Mar. (86)	0 Sat.	20 32 33	3 Mar. (63)	5 Thur.	183·9077	4458
27 Mar. (86)	2 Mon.	2 44 42	22 Mar. (81)	4 Wed.	218·5902	4459
27 Mar. (86)	3 Tues.	8 56 51	11 Mar. (70)	1 Sun.	94·3129	4460
27 Mar. (86)	4 Wed.	15 9 0	1 Mar. (60)	6 Fri.	308·6678	4461
26 Mar. (86)	5 Thur.	21 21 9	18 Mar. (78)	4 Wed.	4·7182	4462
27 Mar. (86)	0 Sat.	3 33 18	8 Mar. (67)	2 Mon.	219·0730	4463
27 Mar. (86)	1 Sun.	9 45 27	27 Mar. (86)	1 Sun.	253·7554	4464
27 Mar. (86)	2 Mon.	15 57 36	16 Mar. (75)	5 Thur.	129·4783	4465
26 Mar. (86)	3 Tues.	22 9 45	4 Mar. (64)	2 Mon.	5·2011	4466
27 Mar. (86)	5 Thur.	4 21 54	23 Mar. (82)	1 Sun.	39·8835	4467
27 Mar. (86)	6 Fri.	10 34 3	13 Mar. (72)	6 Fri.	254·2383	4468
27 Mar. (86)	0 Sat.	16 46 12	2 Mar. (61)	3 Tues.	129·9612	4469
26 Mar. (86)	1 Sun.	22 58 21	20 Mar. (80)	2 Mon.	164·6435	4470

TABLE

CONCURRENT YEAR.								Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrâdi Vikrama.	Mêshâdi solar year in Bengal.	Kollam.	A.D.	Jovian Saṁvatsara. Southern system.	Jovian Saṁvatsara. Northern system.	
1	2	3	3a	4	5	6	7	8a
4471	1292	1427	776	544-45	1369-70	43 Saumya . .	49 Râkshasa .	...
4472	1293	1428	777	545-46	1370-71	44 Sâdhâraṇa	50 Anala . .	2 Vaiśâkha .
4473	1294	1429	778	546-47	1371-72	45 Virôdhakṛit .	51 Piṅgala . .	...
4474	1295	1430	779	547-48	*1372-73	46 Paridhâvin .	52 Kâlayukta .	10 Pausha .
4475	1296	1431	780	548-49	1373-74	47 Pramâdin .	53 Siddhârthin .	...
4476	1297	1432	781	549-50	1374-75	48 Ânanda . .	54 Raudra . .	...
4477	1298	1433	782	550-51	1375-76	49 Râkshasa .	55 Durmati .	7 Âśvina .
4478	1299	1434	783	551-52	*1376-77	50 Anala . .	56 Dundubhi .	...
4479	1300	1435	784	552-53	1377-78	51 Piṅgala . .	57 Rudhirôdgârin	...
4480	1301	1436	785	553-54	1378-79	52 Kâlayukta .	58 Raktâksha .	3 Jyêshṭha .
4481	1302	1437	786	554-55	1379-80	53 Siddhârthin .	59 Krôdhana .	...
4482	1303	1438	787	555-56	*1380-81	54 Raudra . .	60 Kshaya . .	12 Phâlguna .
4483	1304	1439	788	556-57	1381-82	55 Durmati .	1 Prabhava .	...
4484	1305	1440	789	557-58	1382-83	56 Dundubhi .	2 Vibhava .	...
4485	1306	1441	790	558-59	1383-84	57 Rudhirôdgârin .	3 Śukla . .	9 Mârgaśira. .
4486	1307	1442	791	559-60	*1384-85	58 Raktâksha .	4 Pramôda .	...
4487	1308	1443	792	560-61	1385-86	59 Krôdhana .	5 Prajâpati .	...
4488	1309	1444	793	561-62	1386-87	60 Kshaya . .	6 Aṅgiras . .	5 Śrâvaṇa .
4489	1310	1445	794	562-63	1387-88	1 Prabhava .	7 Śrîmukha .	...
4490	1311	1446	795	563-64	*1388-89	2 Vibhava .	8 Bhâva . .	...
4491	1312	1447	796	564-65	1389-90	3 Śukla . .	9 Yuvan . .	2 Vaiśâkha .
4492	1313	1448	797	565-66	1390-91	4 Pramôda .	10 Dhâtṛi . .	...
4493	1314	1449	798	566-67	1391-92	5 Prajâpati .	11 Îśvara . .	10 Pausha .
4494	1315	1450	799	567-68	*1392-93	6 Aṅgiras . .	12 Bahudhânya .	...
4495	1316	1451	800	568-69	1393-94	7 Srîmukha .	13 Pramâthin .	...

XC—*contd.*

COMMENCEMENT OF THE									
MEAN SOLAR YEAR.					MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day.	Time of mean Mēsha-saṁkrānti.			Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17			19	20	23	1
		H.	M.	S.				
27 Mar. (86) . .	3 Tues. .	5	10	30	9 Mar. (68) .	6 Fri. .	40·2664	4471
27 Mar. (86) . .	4 Wed. .	11	22	39	27 Feb. (58) .	4 Wed. .	254·7212	4472
27 Mar. (86) . .	5 Thur. .	17	34	48	18 Mar. (77) .	3 Tues. .	289·4036	4473
26 Mar. (86) . .	6 Fri. .	23	46	57	6 Mar. (66) .	0 Sat. .	165·1264	4474
27 Mar. (86) . .	1 Sun. .	5	59	6	25 Mar. (84)	6 Fri. .	199·8088	4475
27 Mar. (86) . .	2 Mon. .	12	11	15	14 Mar. (73) .	3 Tues. .	75·5317	4476
27 Mar. (86) . .	3 Tues. .	18	23	24	4 Mar. (63) .	1 Sun. .	289·8864	4477
27 Mar. (87) . .	5 Thur. .	0	35	33	22 Mar. (82) .	0 Sat. .	324·5689	4478
27 Mar. (86) . .	6 Fri. .	6	47	42	11 Mar. (70) .	4 Wed. .	200·2917	4479
27 Mar. (86) : .	0 Sat. .	12	59	51	28 Feb. (59) .	1 Sun. .	76·0146	4480
27 Mar. (86) . .	1 Sun. .	19	12	0	19 Mar. (78) .	0 Sat. .	110·6969	4481
27 Mar. (87) . .	3 Tues. .	1	24	9	8 Mar. (68) .	5 Thur. .	325·0518	4482
27 Mar. (86) . .	4 Wed. .	7	36	18	26 Mar. (85) .	3 Tues. .	21·1022	4483
27 Mar. (86) . .	5 Thur. .	13	48	27	16 Mar. (75) .	1 Sun. .	235·4571	4484
27 Mar. (86) . .	6 Fri. .	20	0	36	5 Mar. (64) .	5 Thur. .	111·1798	4485
27 Mar. (87) . .	1 Sun. .	2	12	45	23 Mar. (83) .	4 Wed. .	145·8623	4486
27 Mar. (86) . .	2 Mon. .	8	24	54	12 Mar. (71) .	1 Sun. .	21·5851	4487
27 Mar. (86) . .	3 Tues. .	14	37	3	2 Mar. (61) .	6 Fri. .	235·9399	4488
27 Mar. (86) . .	4 Wed. .	20	49	12	21 Mar. (80) .	5 Thur. .	270·6223	4489
27 Mar. (87) . .	6 Fri. .	3	1	21	9 Mar. (69) .	2 Mon. .	146·3452	4490
27 Mar. (86) . .	0 Sat. .	9	13	30	26 Feb. (57) .	6 Fri. .	22·0680	4491
27 Mar. (86) . .	1 Sun. .	15	25	39	17 Mar. (76) .	5 Thur. .	56·7503	4492
27 Mar. (86) . .	2 Mon. .	21	37	48	7 Mar. (66) .	3 Tues. .	271·1052	4493
27 Mar. (87) . .	4 Wed. .	3	49	57	25 Mar. (85) .	2 Mon. .	305·7876	4494
27 Mar. (86) . .	5 Thur. .	10	2	6	14 Mar. (73) .	6 Fri. .	181·5104	4495

TABLE

CONCURRENT YEAR.						Jovian Saṁvatsara.		Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4496	1317	1452	801	569-70	1394-95	8 Bhāva . .	14 Vikrama .	7 Āśvina .
4497	1318	1453	802	570-71	1395-96	9 Yuvan . .	15 Vṛisha . .	...
4498	1319	1454	803	571-72	*1396-97	10 Dhātṛi . .	16 Chitrabhānu .	...
4499	1320	1455	804	572-73	1397-98	11 Īśvara . .	17 Subhānu .	3 Jyēshṭha .
4500	1321	1456	805	573-74	1398-99	12 Bahudhānya .	18 Tāraṇa . .	...
4501	1322	1457	806	574-75	1399-1400	13 Pramāthin .	19 Pārthiva .	12 Phālguna .
4502	1323	1458	807	575-76	*1400-01	14 Vikrama .	20 Vyaya . .	...

XC—*concld.*

COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			
Day and month, A.D.	Week-day	Time of mean Mēsha-saṁkrānti.	Day and month, A.D.	Week-day.	*a* (here = *t*, the index of the *tithi*).	
13	14	17	19	20	23	1
		H. M. S.				
27 Mar. (86) . .	6 Fri. .	16 14 15	3 Mar. (62) .	3 Tues. .	57·2333	4496
27 Mar. (86) . .	0 Sat. .	22 26 24	22 Mar. (81) .	2 Mon. .	91·9157	4497
27 Mar. (87) . .	2 Mon. .	4 38 33	11 Mar. (71) .	0 Sat. .	303·2704	4498
27 Mar. (86) . .	3 Tues. .	10 50 42	28 Feb. (59) .	4 Wed. .	181·9933	4499
27 Mar. (86) . .	4 Wed. .	17 2 51	19 Mar. (78) .	3 Tues. .	216·6757	4500
27 Mar. (86) . .	5 Thur. .	23 15 0	8 Mar. (67) .	0 Sat. .	92·3986	4501
27 Mar. (87) . .	0 Sat. .	5 27 9	26 Mar. (86) .	6 Fri. .	127·0810	4502

TABLE XCI.

DURATION AND COLLECTIVE DURATION OF MEAN SOLAR MONTHS ACCORDING TO THE BRAHMA-SIDDHĀNTA, WITH INCREASE OF *a* AT EACH SAṀKRĀNTI.

Mean luni-solar month, ending after the second of the two solar saṁkrāntis connected with it.	At the mean solar saṁkrāntis.	Collective duration in time, and collective increase of *a* from mean Mēsha-saṁkrānti to the several saṁkrāntis.					
		Day.	Week-day.	H.	M.	S.	*a*
1	2	3					4
	Mīna-saṁk. (*of previous year*).						
1 Chaitra							
	Mēsha-saṁk.	0	0	0	0	0	0
2 Vaiśākha							
	Vṛishabha-saṁk.	30	(2)	10	31	0¾	307·3492
3 Jyēshṭha							
	Mithuna-saṁk.	60	(4)	21	2	1½	614·6983
4 Āshāḍha							
	Karka-saṁk.	91	(0)	7	33	2¼	922·0475
5 Srāvaṇa							
	Siṁha-saṁk.	121	(2)	18	4	3	1229·3966
6 Bhādrapada							
	Kanyā-saṁk.	152	(5)	4	35	3¾	1536·7458
7 Āśvina							
	Tulā-saṁk.	182	(0)	15	6	4½	1844·0949
8 Kārttika							
	Vṛiśchika-saṁk.	213	(3)	1	37	5¼	2151·4441
9 Mārgaśira							
	Dhanus-saṁk.	243	(5)	12	8	6	2458·7933
10 Pausha							
	Makara-saṁk.	273	(0)	22	39	6¾	2766·1424
11 Māgha							
	Kumbha-saṁk.	304	(3)	9	10	7½	3073·4916
12 Phālguna							
	Mīna-saṁk.	334	(5)	19	41	8¼	3380·8407
1 Chaitra (*of following year*).							
	Mēsha-saṁk. (*of following year*).	365	(1)	6	12	9	3688·1899

The duration of each mean solar month is $30^{d}\ 10^{h}\ 31^{m}\ 0\frac{3}{4}^{s}$; and in this time the mean moon's increase of distance from mean sun (our *a*), in measurement by 10,000ths of circle, is 307·349156595.

A saṁkrānti occurs at the moment when the mean sun enters a zodiacal sign.

TABLE XCII.

Century-Table.

Value of a (= t) at beginning of centuries K.Y., i.e. at mean sunrise on day of occurrence of mean Mēsha-saṁkrānti (mean sun at 0°) in first year of century. [Centuries 38, 44, were defective; the rest common.]

Beginning of K.Y. century.	Beginning in A.D.	Week-day.	a (= t).
37	599	(0)	6228·4770
38	699	(0)	5100·3761
39	799	(6)	3633·6433
40	899	(6)	2505·5425
41	999	(6)	1377·4416
42	1099	(6)	249·3408
43	1199	(6)	9121·2399
44	1299	(6)	7993·1391
45	1399	(5)	6526·4063

For odd years of centuries use the *Siddhānta-Śirōmaṇi* Table LVII-B (*above, Vol. XV*).

TABLE XCIII.

Mean sunrise values of a (distance of mean moon from mean sun) in 10,000ths of circle for a month previous to the day on which mean Mēsha-saṁkrānti occurred.

Interval of days from mean Mēsha-saṁkrānti day.	Week-day.	a (mean sunrise value).	Interval of days from mean Mēsha-saṁkrānti day.	Week-day.	a (mean sunrise value).
1	2	3	1	2	3
31	(4)	9502·4085	15	(6)	4920·5202
30	(5)	9841·0404	14	(0)	5259·1522
29	(6)	179·6724	13	(1)	5597·7842
28	(0)	518·3044	12	(2)	5936·4162
27	(1)	856·9364	11	(3)	6275·0482
26	(2)	1195·5684	10	(4)	6613·6801
25	(3)	1534·2004	9	(5)	6952·3121
24	(4)	1872·8324	8	(6)	7290·9441
23	(5)	2211·4643	7	(0)	7629·5761
22	(6)	2550·0963	6	(1)	7968·2081
21	(0)	2888·7283	5	(2)	8306·8401
20	(1)	3227·3603	4	(3)	8645·4721
19	(2)	3565·9923	3	(4)	8984·1040
18	(3)	3904·6243	2	(5)	9322·7360
17	(4)	4243·2563	1	(6)	9661·3680
16	(5)	4581·8882	0	(0)	0·0

The use of this Table is explained in Example 2 of this article, and in Example 1 of article on the *First Ārya-Siddhānta, mean system* (*above, Vol. XVI*).

TABLE XCIV.

TIME-EQUIVALENTS OF THE TITHI (a OR t), NAKSHATRA (n), AND YŌGA (y) UNITS.

In very close cases it is sometimes necessary to calculate the exact moment of the beginning and ending of *tithis*, *nakshatras* and *yōgas*, with greater accuracy than can be obtained by the use of Table X, *Indian Calendar*, or Table LXX (*above*, *Vol. XVI, p. 216*), where the time-equivalent of the unit, respectively, is given only in hours and minutes. My general working Tables for several of the Hindu astronomical *Siddhāntas* already published yield results, stated in measurement by 10,000ths of the circle, with an accuracy extending to four places of decimals, and the following Table enables the result to be translated into time down to a fraction of a second. It may be used for all astronomical authorities.

The tithi-index unit.

The *tithi*-unit is $\frac{1}{10,000}$th of a mean lunation. The mean lunation, according to the *Ārya*- and *Sūrya-Siddhāntas*, occupies $29^d\ 12^h\ 44^m\ 2^s{\cdot}79$. The unit, or 10,000th part of this, is $4^m{\cdot}2524046$, or $4^m\ 15^s{\cdot}144279$.

The nakshatra-index unit.

The moon's *nakshatra*, or her position in the heavens, mean or true, is found by adding the *tithi*-index, a or t, to the index of the sun's longitude, s, mean or true. Both these values are found in the ordinary course of calculation for a date.

The mean *nakshatra*-value $n = 10,000$ is reached in $27^d\ 7^h\ 43^m\ 12^s{\cdot}3$. In this period the sun's mean motion amounts, in 10,000ths of circle measurement, to 748·0087 (*Table XLIV above* (*Vol. XIV*)) and the moon's mean distance from mean sun increases (*Table LIV A, B* (*Vol. XV*)) to 9251·9913. Total 10,000.

$27^d\ 7^h\ 43^m\ 12^s{\cdot}3 = 39343^m{\cdot}205$, and this divided by 10,000 fixes the time-equivalent of the *nakshatra*-unit as $3^m{\cdot}9343205$, or $3^m\ 56^s{\cdot}05923$.

The yōga-index unit.

Similarly the *yōga-chakra* is estimated by the *Sūrya-Siddhānta* (*Indian Calendar*, *p. 62, § 113*) as occupying 36605·116 minutes of time, or $25^d\ 10^h\ 5^m\ 6^s{\cdot}96$.[1] The *yōga*-unit therefore is $3^m{\cdot}6605116$, or $3^m\ 39^s{\cdot}6307$.

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[1] The *yōga* formula is $y = s$ (sun's long.) + n (moon's *nakshatra*), and, since $n = s + a$, $y = 2s + a$. In the period noted it will be found by calculation, using Table XLIV (*above*, *Vol. XIV*), that the mean sun s arrives, in 10,000ths of circle measurement, at long. 695·9511 ; and by using Table LXIV (*Vol. XVI*) that in the same period the mean moon has increased her distance from mean sun (a) by 8608·0964. Twice s = 1391·9022, and this + 8608·0964 (the value of a) = 9999·9988, practically 10,000 exactly. Table LXIV was prepared according to the *First Ārya-Siddhānta*. Using *Siddhānta-Śirōmaṇi* and *Brahma-Siddhānta* estimates (*Table LIV*) the total amounts to 10,000·0015, I have as yet no similar Table according to *Sūrya-Siddhānta* requirements; but from what has been said it may be assumed that its estimate of the time occupied by one *yōga-chakra* (= 10,000) is correct.

TABLE XCIV-A.

TIME-EQUIVALENTS.

TITHI-INDEX UNITS.

(" Arg." = a or t.)

Arg.	H.	M.	S.	Arg.	H.	M.	S.	Arg.	H.	M.	S.	Arg.	H.	M.	S.
1	0	4	15·14	30	2	7	34·33	59	4	10	53·51	88	6	14	12·70
2	0	8	30·29	31	2	11	49·47	60	4	15	8·7	89	6	18	27·84
3	0	12	45·43	32	2	16	4·62	61	4	19	23·80	90	6	22	42·99
4	0	17	0·58	33	2	20	19·76	62	4	23	38·95	91	6	26	58·13
5	0	21	15·72	34	2	24	34·91	63	4	27	54·09	92	6	31	13·27
6	0	25	30·87	35	2	28	50·05	64	4	32	9·23	93	6	35	28·42
7	0	29	46·01	36	2	33	5·19	65	4	36	24·38	94	6	39	43·56
8	0	34	1·15	37	2	37	20·34	66	4	40	39·52	95	6	43	58·71
9	0	38	16·30	38	2	41	35·48	67	4	44	54·67	96	6	48	13·85
10	0	42	31·44	39	2	45	50·63	68	4	49	9·81	97	6	52	29·00
11	0	46	46·59	40	2	50	5·77	69	4	53	24·96	98	6	56	44·14
12	0	51	1·73	41	2	54	20·92	70	4	57	40·10	99	7	0	59·28
13	0	55	16·88	42	2	58	36·06	71	5	1	55·24	100	7	5	14·43
14	0	59	32·02	43	3	2	51·20	72	5	6	10·39	200	14	10	28·86
15	1	3	47·16	44	3	7	6·35	73	5	10	25·53	300	21	15	43·28
16	1	8	2·31	45	3	11	21·49	74	5	14	40·68	400	28	20	57·71
17	1	12	17·45	46	3	15	36·64	75	5	18	55·82	500	35	26	12·14
18	1	16	32·60	47	3	19	51·78	76	5	23	10·97	600	42	31	26·57
19	1	20	47·74	48	3	24	6·93	77	5	27	26·11	700	49	36	41·00
20	1	25	2·29	49	3	28	22·07	78	5	31	41·25	800	56	41	55·42
21	1	29	18·03	50	3	32	37·21	79	5	35	56·40	900	63	47	9·85
22	1	33	33·17	51	3	36	52·36	80	5	40	11·54	1000	70	52	24·28
23	1	37	48·32	52	3	41	7·50	81	5	44	26·69				
24	1	42	3·46	53	3	45	22·65	82	5	48	41·83				
25	1	46	18·61	54	3	49	37·79	83	5	52	56·98				
26	1	50	33·75	55	3	53	52·94	84	5	57	12·20				
27	1	54	48·90	56	3	58	8·08	85	6	1	27·26				
28	1	59	4·04	57	4	2	23·22	86	6	5	42·41				
29	2	3	19·18	58	4	6	38·37	87	6	9	57·55				

TABLE XCIV-B.

TIME-EQUIVALENTS.

DECIMALS OF TITHI-INDEX UNITS.

First 2 decimals.	M.	S.	First 2 decimals.	M.	S.	First 2 decimals.	M.	S.
·01	0	2·55	·34	1	26·75	·67	2	50·95
·02	0	5·10	·35	1	29·30	·68	2	53·50
·03	0	7·65	·36	1	31·85	·69	2	56·05
·04	0	10·21	·37	1	34·40	·70	2	58·60
·05	0	12·76	·38	1	36·95	·71	3	1·15
·06	0	15·31	·39	1	39·51	·72	3	3·70
·07	0	17·86	·40	1	42·06	·73	3	6·26
·08	0	20·41	·41	1	44·61	·74	3	8·81
·09	0	22·96	·42	1	47·16	·75	3	11·36
·10	0	25·51	·43	1	49·71	·76	3	13·91
·11	0	28·07	·44	1	52·26	·77	3	16·46
·12	0	30·62	·45	1	54·81	·78	3	19·01
·13	0	33·17	·46	1	57·37	·79	3	21·56
·14	0	35·72	·47	1	59·92	·80	3	24·12
·15	0	38·27	·48	2	2·47	·81	3	26·67
·16	0	40·82	·49	2	5·02	·82	3	29·22
·17	0	43·37	·50	2	7·57	·83	3	31·78
·18	0	45·93	·51	2	10·12	·84	3	34·32
·19	0	48·48	·52	2	12·68	·85	3	36·87
·20	0	51·03	·53	2	15·23	·86	3	39·42
·21	0	53·58	·54	2	17·78	·87	3	41·98
·22	0	56·13	·55	2	20·33	·88	3	44·53
·23	0	58·68	·56	2	22·88	·89	3	47·08
·24	0	61·23	·57	2	25·43	·90	3	49·63
·25	1	3·79	·58	2	27·98	·91	3	52·18
·26	1	6·34	·59	2	30·54	·92	3	54·73
·27	1	8·89	·60	2	33·09	·93	3	57·28
·28	1	11·44	·61	2	35·64	·94	3	59·84
·29	1	13·99	·62	2	38·19	·95	4	2·39
·30	1	16·54	·63	2	40·74	·96	4	4·94
·31	1	19·09	·64	2	43·29	·97	4	7·49
·32	1	21·65	·65	2	45·84	·98	4	10·04
·33	1	24·20	·66	2	48·40	·99	4	12·59

3rd and 4th decimals.	S.	3rd and 4th decimals.	S.	3rd and 4th decimals.	S.
·0001	0·03	·0034	0·87	·0067	1·71
·0002	0·05	·0035	0·89	·0068	1·73
·0003	0·08	·0036	0·92	·0069	1·76
·0004	0·10	·0037	0·94	·0070	1·79
·0005	0·13	·0038	0·97	·0071	1·81
·0006	0·15	·0039	1·00	·0072	1·84
·0007	0·18	·0040	1·02	·0073	1·86
·0008	0·20	·0041	1·05	·0074	1·89
·0009	0·23	·0042	1·07	·0075	1·91
·0010	0·26	·0043	1·10	·0076	1·94
·0011	0·28	·0044	1·12	·0077	1·96
·0012	0·31	·0045	1·15	·0078	1·99
·0013	0·33	·0046	1·17	·0079	2·02
·0014	0·36	·0047	1·20	·0080	2·04
·0015	0·38	·0048	1·22	·0081	2·07
·0016	0·41	·0049	1·25	·0082	2·09
·0017	0·43	·0050	1·28	·0083	2·12
·0018	0·46	·0051	1·30	·0084	2·14
·0019	0·48	·0052	1·33	·0085	2·17
·0020	0·51	·0053	1·35	·0086	2·19
·0021	0·54	·0054	1·38	·0087	2·22
·0022	0·56	·0055	1·40	·0088	2·25
·0023	0·59	·0056	1·43	·0089	2·27
·0024	0·61	·0057	1·45	·0090	2·30
·0025	0·64	·0058	1·48	·0091	2·32
·0026	0·66	·0059	1·51	·0092	2·35
·0027	0·69	·0060	1·53	·0093	2·37
·0028	0·71	·0061	1·56	·0094	2·40
·0029	0·74	·0062	1·58	·0095	2·42
·0030	0·77	·0063	1·61	·0096	2·45
·0031	0·79	·0064	1·63	·0097	2·47
·0032	0·82	·0065	1·66	·0098	2·50
·0033	0·84	·0066	1·68	·0099	2·52

TABLE XCIV-C.

Time-equivalents.

Nakshatra-index units.

Arg.	H.	M.	S.	Arg.	H.	M.	S.	Arg.	H.	M.	S.	Arg.	H.	M.	S.
1	0	3	56·06	31	2	1	57·84	61	3	59	59·61	91	5	58	1·39
2	0	7	52·12	32	2	5	53·90	62	4	3	55·67	92	6	1	57·45
3	0	11	48·18	33	2	9	49·95	63	4	7	51·73	93	6	5	53·51
4	0	15	44·24	34	2	13	46·01	64	4	11	47·79	94	6	9	49·57
5	0	19	40·30	35	2	17	42·07	65	4	15	43·85	95	6	13	45·63
6	0	23	36·36	36	2	21	38·13	66	4	19	39·91	96	6	17	41·69
7	0	27	32·41	37	2	25	34·19	67	4	23	35·97	97	6	21	37·75
8	0	31	28·47	38	2	29	30·25	68	4	27	32·03	98	6	25	33·80
9	0	35	24·53	39	2	33	26·31	69	4	31	28·09	99	6	29	29·86
10	0	39	20·59	40	2	37	22·37	70	4	35	24·15	100	6	33	25·92
11	0	43	16·65	41	2	41	18·43	71	4	39	20·21	200	13	6	51·85
12	0	47	12·71	42	2	45	14·49	72	4	43	16·26	300	19	40	17·78
13	0	51	8·77	43	2	49	10·55	73	4	47	12·32				
14	0	55	4·83	44	2	53	6·61	74	4	51	8·38				
15	0	59	0·89	45	2	57	2·67	75	4	55	4·44				
16	1	2	56·95	46	3	0	58·72	76	4	59	0·50				
17	1	6	53·01	47	3	4	54·78	77	5	2	56·56				
18	1	10	49·07	48	3	8	50·84	78	5	6	52·62				
19	1	14	45·13	49	3	12	46·90	79	5	10	48·68				
20	1	18	41·18	50	3	16	42·96	80	5	14	44·74				
21	1	22	37·24	51	3	20	39·02	81	5	18	40·80				
22	1	26	33·30	52	3	24	35·08	82	5	22	36·86				
23	1	30	29·36	53	3	28	31·14	83	5	26	32·92				
24	1	34	25·42	54	3	32	27·20	84	5	30	28·98				
25	1	38	21·48	55	3	36	23·26	85	5	34	25·03				
26	1	42	17·54	56	3	40	19·32	86	5	38	21·09				
27	1	46	13·60	57	3	44	15·38	87	5	42	17·15				
28	1	50	9·66	58	3	48	11·44	88	5	46	13·21				
29	1	54	5·72	59	3	52	7·49	89	5	50	9·27				
30	1	58	1·78	60	3	56	3·55	90	5	54	5·33				

TABLE XCIV-D.

TIME-EQUIVALENTS,

DECIMALS OF NAKSHATRA-INDEX UNITS.

First 2 decimals.	M.	S.	First 2 decimals.	M.	S.	First 2 decimals.	M.	S.
·01	0	2·36	·34	1	20·26	·67	2	38·16
·02	0	4·72	·35	1	22·62	·68	2	40·52
·03	0	7·08	·36	1	24·98	·69	2	42·88
·04	0	9·44	·37	1	27·34	·70	2	45·24
·05	0	11·80	·38	1	29·70	·71	2	47·60
·06	0	14·16	·39	1	32·06	·72	2	49·96
07	0	16·52	·40	1	34·42	·73	2	52·32
·08	0	18·88	·41	1	36·78	·74	2	54·68
·09	0	21·25	·42	1	39·14	·75	2	57·04
·10	0	23·61	·43	1	41·51	·76	2	59·40
·11	0	25·97	·44	1	43·87	·77	3	1·77
·12	0	28·33	·45	1	46·23	·78	3	4·13
·13	0	30·69	·46	1	48·59	·79	3	6·49
·14	0	33·05	·47	1	50·95	·80	3	8·85
·15	0	35·41	·48	1	53·31	·81	3	11·21
·16	0	37·77	·49	1	55·67	·82	3	13·57
·17	0	40·13	·50	1	58·03	·83	3	15·93
·18	0	42·49	·51	2	0·39	·84	3	18·29
·19	0	44·85	·52	2	2·75	·85	3	20·65
·20	0	47·21	·53	2	5·11	·86	3	23·01
·21	0	49·57	·54	2	7·47	·87	3	25·37
·22	0	51·93	·55	2	9·83	·88	3	27·73
·23	0	54·29	·56	2	12·19	·89	3	30·09
·24	0	56·65	·57	2	14·55	·90	3	32·45
·25	0	59·01	·58	2	16·91	·91	3	34·81
·26	1	1·38	·59	2	19·28	·92	3	37·17
·27	1	3·74	·60	2	21·64	·93	3	39·54
·28	1	6·10	·61	2	24·00	·94	3	41·90
·29	1	8·46	·62	2	26·36	·95	3	44·26
·30	1	10·82	·63	2	28·72	·96	3	46·62
·31	1	13·18	·64	2	31·08	·97	3	48·98
·32	1	15·54	·65	2	33·44	·98	3	51·34
·33	1	17·90	·66	2	35·80	·99	3	53·70

3rd and 4th decimals.	S.	3rd and 4th decimals.	S.	3rd and 4th decimals.	S.
·0001	0·02	·0034	0·80	·0067	1·58
·0002	0·05	·0035	0·83	·0068	1·61
·0003	0·07	·0036	0·85	·0069	1·63
·0004	0·09	·0037	0·87	·0070	1·65
·0005	0·12	·0038	0·90	·0071	1·68
·0006	0·14	·0039	0·92	·0072	1·70
·0007	0·17	·0040	0·94	·0073	1·72
·0008	0·19	·0041	0·97	·0074	1·75
·0009	0·21	·0042	0·99	·0075	1·77
·0010	0·24	·0043	1·02	·0076	1·79
·0011	0·26	·0044	1·04	·0077	1·82
·0012	0·28	·0045	1·06	·0078	1·84
·0013	0·31	·0046	1·09	·0079	1·86
·0014	0·33	·0047	1·11	·0080	1·89
·0015	0·35	·0048	1·13	·0081	1·91
·0016	0·38	·0049	1·16	·0082	1·94
·0017	0·40	·0050	1·18	·0083	1·96
·0018	0·42	·0051	1·20	·0084	1·98
·0019	0·45	·0052	1·23	·0085	2·01
·0020	0·47	·0053	1·25	·0086	2·03
·0021	0·50	·0054	1·27	·0087	2·05
·0022	0·52	·0055	1·30	·0088	2·08
·0023	0·54	·0056	1·32	·0089	2·10
·0024	0·57	·0057	1·35	·0090	2·12
·0025	0·59	·0058	1·37	·0091	2·15
·0026	0·61	·0059	1·39	·0092	2·17
·0027	0·64	·0060	1·42	·0093	2·20
·0028	0·66	·0061	1·44	·0094	2·22
·0029	0·68	·0062	1·46	·0095	2·24
·0030	0·71	·0063	1·49	·0096	2·27
·0031	0·73	·0064	1·51	·0097	2·29
·0032	0·76	·0065	1·53	·0098	2·31
·0033	0·78	·0066	1·56	·0099	2·34

TABLE XCIV-E.

TIME-EQUIVALENTS.

YOGA-INDEX UNITS.

Arg.	H.	M.	S.	Arg.	H.	M.	S.	Arg.	H.	M.	S.	Arg.	H.	M.	S.
1	0	3	39·63	31	1	53	28·55	61	3	43	17·47	91	5	33	6·39
2	0	7	19·26	32	1	57	8·18	62	3	46	57·10	92	5	36	46·02
3	0	10	58·89	33	2	0	47·81	63	3	50	36·73	93	5	40	25·65
4	0	14	38·52	34	2	4	27·44	64	3	54	16·36	94	5	44	5·29
5	0	18	18·15	35	2	8	7·07	65	3	57	56·00	95	5	47	44·92
6	0	21	57·78	36	2	11	46·71	66	4	1	35·63	96	5	51	24·55
7	0	25	37·41	37	2	15	26·34	67	4	5	15·26	97	5	55	4·18
8	0	29	17·05	38	2	19	5·97	68	4	8	54·89	98	5	58	43·81
9	0	32	56·68	39	2	22	45·60	69	4	12	34·52	99	6	2	23·44
10	0	36	36·31	40	2	26	25·23	70	4	16	14·15	100	6	6	3·07
11	0	40	15·94	41	2	30	4·86	71	4	19	53·78	200	12	12	6·14
12	0	43	55·57	42	2	33	44·49	72	4	23	33·41	300	18	18	9·21
13	0	47	35·20	43	2	37	24·12	73	4	27	13·04				
14	0	51	14·83	44	2	41	3·75	74	4	30	52·67				
15	0	54	54·46	45	2	44	43·38	75	4	34	32·30				
16	0	58	34·09	46	2	48	23·01	76	4	38	11·93				
17	1	2	13·72	47	2	52	2·64	77	4	41	51·56				
18	1	5	53·35	48	2	55	42·27	78	4	45	31·19				
19	1	9	32·98	49	2	59	21·90	79	4	49	10·83				
20	1	13	12·61	50	3	3	1·53	80	4	52	50·46				
21	1	16	52·24	51	3	6	41·17	81	4	56	30·09				
22	1	20	31·88	52	3	10	20·80	82	5	0	9·72				
23	1	24	11·51	53	3	14	0·43	83	5	3	49·35				
24	1	27	51·14	54	3	17	40·06	84	5	7	28·98				
25	1	31	30·77	55	3	21	19·69	85	5	11	8·61				
26	1	35	10·40	56	3	24	59·32	86	5	14	48·24				
27	1	38	50·03	57	3	28	38·95	87	5	18	27·87				
28	1	42	29·66	58	3	32	18·58	88	5	22	7·50				
29	1	46	9·29	59	3	35	58·21	89	5	25	47·13				
30	1	49	48·92	60	3	39	37·84	90	5	29	26·76				

TABLE XCIV-F.

TIME-EQUIVALENTS.

DECIMALS OF YOGA-INDEX UNITS.

First 2 decimals.	M.	S.	First 2 decimals.	M.	S.	First 2 decimals.	M.	S.
·01	0	2·20	·34	1	14·67	·67	2	27·15
·02	0	4·39	·35	1	16·87	·68	2	29·35
·03	0	6·59	·36	1	19·07	·69	2	31·55
·04	0	8·79	·37	1	21·26	·70	2	33·74
·05	0	10·98	·38	1	23·46	·71	2	35·94
·06	0	13·18	·39	1	25·66	·72	2	38·13
·07	0	15·37	·40	1	27·85	·73	2	40·33
·08	0	17·57	·41	1	30·05	·74	2	42·53
·09	0	19·77	·42	1	32·24	·75	2	44·72
·10	0	21·96	·43	1	34·44	·76	2	46·92
·11	0	24·16	·44	1	36·64	·77	2	49·12
·12	0	26·36	·45	1	38·83	·78	2	51·31
·13	0	28·55	·46	1	41·03	·79	2	53·51
·14	0	30·75	·47	1	43·23	·80	2	55·70
·15	0	32·94	·48	1	45·42	·81	2	57·90
·16	0	35·14	·49	1	47·62	·82	3	0·10
·17	0	37·34	·50	1	49·82	·83	3	2·29
·18	0	39·53	·51	1	52·01	·84	3	4·49
·19	0	41·73	·52	1	54·21	·85	3	6·69
·20	0	43·93	·53	1	56·40	·86	3	8·88
·21	0	46·12	·54	1	58·60	·87	3	11·08
·22	0	48·32	·55	2	0·80	·88	3	13·28
·23	0	50·52	·56	2	2·99	·89	3	15·47
·24	0	52·71	·57	2	5·19	·90	3	17·67
·25	0	54·91	·58	2	7·39	·91	3	19·86
·26	0	57·10	·59	2	9·58	·92	3	22·06
·27	0	59·30	·60	2	11·78	·93	3	24·26
·28	1	1·50	·61	2	13·97	·94	3	26·45
·29	1	3·69	·62	2	16·17	·95	3	28·65
·30	1	5·89	·63	2	18·37	·96	3	30·85
·31	1	8·09	·64	2	20·56	·97	3	33·04
·32	1	10·28	·65	2	22·76	·98	3	35·24
·33	1	12·48	·66	2	24·96	·99	3	37·43

3rd and 4th decimals.	S.	3rd and 4th decimals.	S.	3rd and 4th decimals.	S.
·0001	0·02	·0034	0·75	·0067	1·47
·0002	0·04	·0035	0·77	·0068	1·49
·0003	0·07	·0036	0·79	·0069	1·52
·0004	0·09	·0037	0·81	·0070	1·54
·0005	0·11	·0038	0·83	·0071	1·56
·0006	0·13	·0039	0·86	·0072	1·58
·0007	0·15	·0040	0·88	·0073	1·60
·0008	0·18	·0041	0·90	·0074	1·63
·0009	0·20	·0042	0·92	·0075	1·65
·0010	0·22	·0043	0·94	·0076	1·67
·0011	0·24	·0044	0·97	·0077	1·69
·0012	0·26	·0045	0·99	·0078	1·71
·0013	0·29	·0046	1·01	·0079	1·74
·0014	0·31	·0047	1·03	·0080	1·76
·0015	0·33	·0048	1·05	·0081	1·78
·0016	0·35	·0049	1·08	·0082	1·80
·0017	0·37	·0050	1·10	·0083	1·82
·0018	0·40	·0051	1·12	·0084	1·84
·0019	0·42	·0052	1·14	·0085	1·87
·0020	0·44	·0053	1·16	·0086	1·89
·0021	0·46	·0054	1·19	·0087	1·91
·0022	0·48	·0055	1·21	·0088	1·93
·0023	0·51	·0056	1·23	·0089	1·95
·0024	0·53	·0057	1·25	·0090	1·98
·0025	0·55	·0058	1·27	·0091	2·00
·0026	0·57	·0059	1·30	·0092	2·02
·0027	0·59	·0060	1·32	·0093	2·04
·0028	0·61	·0061	1·34	·0094	2·06
·0029	0·64	·0062	1·36	·0095	2·09
·0030	0·66	·0063	1·38	·0096	2·11
·0031	0·68	·0064	1·41	·0097	2·13
·0032	0·70	·0065	1·43	·0098	2·15
·0033	0·72	·0066	1·45	·0099	2·17

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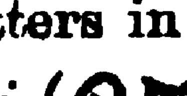
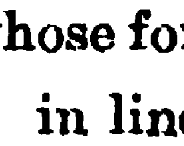
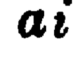
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No. 16.—VELVIKUDI GRANT OF NEDUNJADAIYAN: THE THIRD YEAR OF REIGN.

By H. Krishna Sastri, B.A., Ootacamund.

Sixteen years ago, when Mr. Venkayya in his Epigraphical Report for 1908 (pp. 50 ff) discussed with great ability the contents of the fourth of the early Pāṇḍya copper-plates discovered till then, he remarked: "The originals of these plates have not been traced. The following account of them is based on a preliminary study of two excellent impressions belonging probably to Sir Walter Elliot's collections kindly placed at my disposal by Dr. Fleet in 1893." These duplicate impressions of the grant now in the editor's possession, are marked by Dr. Fleet "I-n-11" and must have been originally intended for publication in the *Indian Antiquary*. Mr. Venkayya, however, could not at once prepare an article on them, as the early Pāṇḍya chronology was then obscure. About the end of 1915, Dr. L. D. Barnett of the British Museum, London, sent me impressions of a copper-plate inscription preserved in that institution and wished to know if it had been published and what its contents were. Curiously enough, it happened that these were the very same impressions of which Mr. Venkayya was unable to trace the originals. I wrote back to Dr. Barnett informing that the plates contained on them an important Pāṇḍya grant which had been already noticed in the Epigraphical Report for 1908 and asked for certain details about them. He says briefly: "There is no seal on the grant: the plates are held by a thin copper-ring, which has been cut." The detailed measurement of the plates and their number, consequently, remain to be what has been described by Mr. Venkayya, *viz.*, these are **ten copper-plates**, of which the first seven are numbered on the left margin on their inner sides and the impressions measure $10\frac{7}{8}''$ by $3\frac{1}{8}''$, the first and the last plates being written only on their inner sides.

The writing on the plates is both in the **Grantha** and **Vaṭṭeḻuttu** characters, the first being used in Sanskrit passages (*ll.* 1 to 30 and *ll.* 142 to 150) and in all Sanskrit words that occur in the Tamiḻ portion of the inscription. The Grantha characters and orthography do not call for any special remarks except that in almost all conjunct consonants, where they are written one below the other, the upper or the first member of the compound letter is marked by the *virāma*, following evidently the Tamiḻ method of writing. The same influence is also observed in the pronunciation and spelling of Sanskrit words, *e.g.*, *pārakan* and *purōkan* (*l.* 99), *kritāpatānan* (*l.* 100) and *kaṇḍakanishṭuran* (*l.* 100 f.). In one particular case, the purely Tamiḻ word *antaṉar* (l. 61) is written partly in Grantha and partly in Tamiḻ. The use of *tsha* for *ksha* (*l.* 144), *nma* for *tma*, *dma* for *lma* and *ri* for *ṛi* or *ṛu*, in compound letters, also shows the same influence. Consonants coming after *r* are always doubled except in °र्द्ध° in line 14 and °र्त्ति° in line 17. The *upadhmānīya* and *jihvāmūlīya* symbols are used throughout in their proper places. The *anusvāra* used in -*varggaṁ*=*yudhi* (*l.* 14) and in *saṁyati* (*l.* 28) is worth noticing. It denotes the *anunāsika* forms of *yu* and *ya* and is shaped in the form of a crescent with a dot in it placed over the heads of these letters. In his commentary on Pāṇini VIII-4-59 Bhaṭṭōji-Dīkshita remarks that the *anusvāra* in such cases changes itself optionally into the nasal form of *ya*.

The **Vaṭṭeḻuttu** character so called, is an oblique form of Tamiḻ (excepting certain letters) with a few angularities which on careful scrutiny could be easily accounted for. The only four letters in the alphabet whose form cannot be explained with reference to Tamiḻ are the vowel letters *i* () (see *irakki*° in line 40), *ai* () (see *aimpadiṉvar* in line 135) and the more frequently occurring *ṉa* ( and *po* ). In the matter of the Vaṭṭeḻuttu palæography of this inscription it might be noted (1) that the *puḷḷi* is correctly inserted throughout the inscription except in a few cases, *e.g.*, *vōṭṭi*= (*l.* 31), *ottiṟattum*= (*l.* 47 f.), *aṟṟam* (*ibid.*), =*avaṟku* (*l.* 46) and *vēḷvi*° (*l.* 37); (2) that it is unnecessarily inserted over the vocalic *e* and *o* and even

2 s

over the initial vowel letter *o*, as in *moṉṉum*, *chchoṟ*, (*l.* 34), *koṟkai*, *koṟṟaṉ*, *koṇḍa* (*l.* 35), *dēy* (*l.* 38), *goḷi* (*l.* 43), *ṉeṉṉuṅ* (*l.* 45), *ṟṟennan* (*l.* 46), *kkolai*, *chcheḻiyaṉ* (*l.* 50), *olgāda* (*l.* 108 f.), *oḍōda* (*l.* 109), *poḻil* (*l.* 65), *pporu* (*l.* 63), *poruṭṭāga* (*l.* 71); and (3) that it is omitted in a few cases. The shaping of the long *ū*-sign in *rū* (*l.* 119), *ṉū* (*l.* 107) and *ḻū* (*l.* 76) and the use of the Tamiḻ *aḷabeḍai* (Skt. *pluta*) in *kkoḷīya* in line 97 for the purpose of completing the metrical quantity are worthy of notice. This *aḷabeḍai* according to the Tamiḻ grammarians is to be used in (i) selling articles, (ii) calling people at a distance and (iii) in filling up the metrical quantity in a verse. Pāṇini omits (i) and (iii). While in Sanskrit only vowels have *pluta*, in Tamiḻ the consonants (nasals and sibilants) are also thus lengthened.

The orthographical peculiarities such as the insertion of *y* after consonants with the *e*-sign (*ll.* 94, 97f); the substitution of the vowel *i* for *yi* (*ll.* 66, 115, 118, 140); the non-observance of euphonic rules in adding the suffixes *um* (*l.* 93), *uḷ* (*l.* 59), *in* (*l.* 93) and *oḍu* (*l.* 46 f.); the want of distinction between the long and the short *i* (except in the single instance *nīrōḍ=aṭṭi* in line 117) and between the long and the short *o*, are noteworthy. *Puli-ūr* (*l.* 58), °*maiy-iruppai* (*l.* 121 f.), *chey-iḍai* (*l.* 122), *maṇi-imai* (*l.* 81), *kkali-araiśaṉ* (*l.* 90), *kurai-uṟu* and *nirai-uṟu* (*l.* 102) are also cases of the omission of *sandhi*. *Paramēśvaraṉāṟ-Vēḷvikuḍi* (*l.* 110) for °*nāl Vēḷvikuḍi* and *veḷiṟpaṭṭu* for *veḷippaṭṭu* (ll. 41, 49, 52, 88) are evidently wrong forms; *śekkuṅ* (*l.* 120) for *śeykkuṅ* and *aimpadiṉvar* (*l.* 135) for *aimpadiṉmar* may be regarded as colloquial usages: similar also may be the use of *kuḍu* (*l.* 125) for *koḍu*. The form *iydu* (*l.* 152) for *idu* through the intermediate form *ihdu* probably gives us the clue for the correct pronunciation of the Tamiḻ *āydam*-sign which is now pronounced as the *jihvāmūlīya* and the *upadhmānīya* forms of the *visarga*. The metre used in the Tamiḻ portion of the inscription is the *Agaval* while in the Sanskrit portion the metres employed are: *Vaṁśastha* (vv. 1, 12), *Anushṭubh* (vv. 2, 17, 20 and 23), *Vasantatilakā* (vv. 3, 9 and 19), *Śārdūlavikrīḍita* (vv. 4, 5, 6 and 10), *Mālabhāriṇī*[1] (vv. 7, 8, 15 and 16), *Upēndravajrā* (vv. 11, 14), *Drutavilambita* (v. 13) and *Āryā* (v. 18).

Palæographically, the Grantha characters of the Vēḷvikuḍi grant differ from those of the Madras Museum plates of Jaṭilavarman,[2] although for reasons stated in the sequel, both of these have to be attributed to the period of the same king Neḍuñjaḍaiyaṉ. The difference is distinctly observed in the formation of the *serif* which in the first case is a plain horizontal line, whereas in the second, it makes a loop with the letter. The bottoms of letters like *ma* and *ba* and the top of the vowel *i* are bent at the base line in the Vēḷvikuḍi grant, whereas in the Madras Museum plates they either form one uniform curve, or are straight; the *upadhmānīya* and the *jihvāmūlīya* signs are not used at all in the Madras Museum plates. The punctuation marks at the end of verses in the Vēḷvikuḍi grant are the *piḷḷaiyār śuḻi* (உ) whereas in the Madras Museum plates they are denoted by the so-called *ōṁ* symbol (ௐ)[3]; *anusvāras* are more frequent in the Madras Museum plates than nasal conjuncts. The Vēḷvikuḍi grant, in numbering the plates, uses the Grantha letter-symbols, whereas the Madras Museum plates use the usual Tamiḻ numerals. In the Vaṭṭeḻuttu alphabet employed, however, the two grants do not seem to differ much, except in the case of the letter *ya* which in the Vēḷvikuḍi grant as in the Āṉaimalai inscription,[4] is uniseptate, while in the Madras Museum plates it is bipartite. This single difference in the characters of the Tamiḻ portion which is the earlier, and perhaps constitutes the grant proper in both, need not show that the two grants must belong to different periods. The

[1] The scheme of this verse as given in the *Chhandōmañjarī* is :—
विषमे ससजा यदा गुरू चेत् सभरा येन तु मालभारिणीयम् ॥

[2] *Ind. Ant.*, Vol. XXII, with Plate, pp. 57 ff.

[3] The latest interpretation of this symbol is *siddhiḥ*, 'success.'

[4] Above, Vol. VIII, p. 317 ff.

insertion of the Grantha portion in the Vēḷvikuḍi grant might have been somewhat earlier than that in the Madras Museum plates.

The **Sanskrit** portion of the record commences with an invocation to Śiva (verse 1) and goes on to refer in general terms to the **Pāṇḍya kings** and their race, of which the family priest was the sage **Agastya**[1] (vv. 2 and 3). At the end of the previous *Kalpa*, it is stated, there was a powerful king named **Pāṇḍya** who was ruling at the entrance into the sea (*i.e.*, on the coast of a gulf) and that the very same king at the beginning of the current *Kalpa* was born as **Budha**, the son of the **Moon** (v. 4). His son was **Purūravas**; and in his family, whose crest was **a pair of fish,** which shared with Indra, the lord of gods, half of his throne and his necklace and was a party in the purāṇic churning of the milk-ocean, was born king **Māṟavarmaṉ**, a patron of the learned (vv. 6 and 8). His son was **Raṇadhīra** (v. 9) and his son **Māṟavarmaṉ II Rājasiṁha** (vv. 10 and 11) at whose presence the king **Pallavamalla** ran away from the battle-field (v. 12). This king Rājasiṁha married a **Maḷava** princess and by her begot king **Jaṭila** (v. 14), who was also called **Parāntaka** (v. 17). Thus ends the short Sanskrit eulogy (*praśasti*) which was composed by the *Sarvakratuyājin* **Varōdaya-Bhaṭṭa** (*l.* 30).

We may now pass on to what the bigger and the more important part of the record, the **Tamiḻ** *praśasti*, has to say, with the remark that the Sanskrit portion, by its brief notice and the very meagre historical material which it supplies in the form of a general introduction, could not have been contemporaneous with the Tamiḻ portion. It was evidently added only later to give a dignified appearance to the grant proper which is in Tamiḻ. This Tamiḻ portion begins with the mention of a past event, namely, that the *kēḷvi*-Brahmans[2] of **Pāgaṉūr-Kūṟṟam** seeing that one of their own community, named **Naṟkoṟṟaṉ,** the headman of **Koṟkai,** who had contemplated the performance of a Vēdic sacrifice, with the help of the ruling Pāṇḍya king (*ādhirāja*) **Palyāgamudukuḍumi Peruvaḻudi**, placed his petition before the king and themselves standing in front of the sacrificial hall, blessed that spot to be thenceforth (?) called Vēḷvikuḍi.[3] The king granted the village to Naṟkoṟṟaṉ and it was thus that the village came to be enjoyed by the latter for a long time. After this, a powerful Kali king, named **Kaḷabhran,** conquering many *ādhirājas*, brought under subjection the whole Pāṇḍya country including, of course the village Vēḷvikuḍi which was then resumed. Some time elapsed and after this sprang forth a powerful **Pāṇḍya**, named **Kaḍuṅgōṉ**, who reconquered the whole land from his enemies. His son was **Avanichūḷāmaṇi Māṟavarmaṉ**. His son was **Śeḻiyaṉ Vāṉavaṉ Śēndan** and his son, **Arikēsari Asamasamaṉ Māṟavarmaṉ,** who won a battle at **Pāḻi** against his enemies; defeated a certain **Vilvēli at Nelvēli**; destroyed the **Paravas** and the people of **Kuṟu-nāḍu**; won a victory at **Śeṉṉilam,** conquered the **Kēraḷa** several times at the strongly fortified town of **Puliyūr**; made many gifts and protected the Brāhmaṇas and the invalids. His son was **Śaḍaiyaṉ,** the lord of the **Koṅga country** (Koṅgarkōmāṉ), who was possessed of the titles **Teṉṉa-Vāṉavaṉ, Śembiyaṉ, Śōḻaṉ** and **Madura-Karunāṭakan**;[4] won a battle at **Marudūr,**

[1] Agastya is also supposed to have been the founder of the Tamiḻ language and the author of the Tamiḻ grammar *Agattiyam* mentioned in Tamiḻ literature. He is referred to as the family priest of the Pāṇḍyas also in Kālidāsa's *Raghuvaṁśa*, VI. 61, and in the commentary on *Iṟaiyanār Agapporuḷ*.

[2] *Kēḷvi-andaṇāḷar* may also mean 'learned Brāhmaṇas'. But *kēḷvi* seems to be used here in a technical sense. In inscriptions we find the word applied to a class of administrative officers whose business was to carry the applications of petitioners to the 'hearing' of the king. See also *Ep. Ind.* Vol. III, p. 69, foot-note 7.

[3] *I.e.*, the village of the sacrifice. In the Tamiḻ portion in *l.* 108 f. it is stated that the village had the name Vēḷvikuḍi given to it by king Mudukuḍumi.

[4] The significance of this title is not apparent. Could it be that like Śembiyaṉ and Śōḻaṉ he could have acquired it by conquering the Western Chālukyas who were known as Karnāṭakas? But we know that these were too far away from the reach of the Pāṇḍyas. Another possible explanation is that the Pāṇḍyas might have intermarried with the Chālukyas and the issue of such an intermarriage might well be called 'the Sweet Karnāṭaka'! Again, the identification of the Kaḷabhra with Karnāṭa by Mr. Venkayya (see below p. 295) seems to gain in significance in considering the propriety of the title Madura-Karunāṭakaṉ held by king Śaḍaiyaṉ.

defeated **Āyavēḷ** in battles at **Śeṅgoḍi** and **Pudāṉkōḍu**, destroyed the **Mahārathas** at the big town (*Mahānagara*) of **Maṅgalapuram** and stamped the symbols of the **bow**; the **tiger** and the **fish** on the big mountain, *viz.*, the Himalayas. This shows his supreme authority over the **Chēra, Chōḷa** and **Pāṇḍya** countries, whose symbols were the bow, the tiger and the fish, respectively. His son was **Tēr-Māṟaṉ** who routed his enemies at **Neḍuvayal, Kuṟumaḍai, Maṇṇi-Kuṟichchi, Tirumaṅgai, Pūvalūr** and **Koḍumbāḷūr,** defeated the Pallava[1] king and captured his elephants and horses in the battle of **Kuḷumbūr,** crushed his enemies at **Periyalūr** crossed the **Kāviri** (*i.e.*, the river **Kāvēri**), subdued (the country of) **Maḷa-Koṅgam,** reached **Pāṇḍi-kKoḍumiḍi,** worshipped **Paśupati** (*i.e.*, Śiva), contracted marriage relations with **Gaṅgarāja**[2] and renewed the fortifications of **Kūḍal, Vañji** and **Kōḻi**. His son was **Parāntaka Neḍuñjaḍaiyaṉ,** who drove the **Kāḍava** (*i.e.*, the Pallava) into the forest, after defeating him in the battle of **Peṇṇāgaḍam** on the southern bank of the river Kāviri and won a battle at **Nāṭṭukkuṟumbu** driving away the Āyavēḷ and the **Kuṟumbas** to the forest. This king possessed a long list of *birudas* such as **Śrīvaraṉ, Śiṉa-chChōḻaṉ, Puṉa-pPūḻiyaṉ,** etc., enumerated in *ll.* 98 ff.

In the **third year of the reign** of this last mentioned king, a man having arrived at Kūḍal with a loud complaint, the king himself enquired into the matter with kind words and hearing from him how his village Vēḷvikuḍi in Pāgaṉūr-kūṟṟam, originally granted under that name by his ancestor, the great king (*Paramēśvaran*) Palyāgamudukuḍumi Peruvaḻudi, was resumed by the Kaḷabhra and had since then remained so even after the resumption of Government by the **Pāṇḍyas,** he ordered the applicant to produce the necessary evidence before the *nāḍu* to prove that the village was his from early times and thus to get it back. The complainant proved his claim accordingly and the king renewed the grant to the applicant **Kāmakkāṇi Naṟchiṅgaṉ,** the headman of Koṟkai. The *āṇatti* of the grant was **Madavikalaṉ Māṟaṅgāri** *alias* **Mūvēndamaṅgala-Ppēraraiyaṉ,** the crest-jewel of the **Vaidyakas** and a native of **Karavandapura,** and a favourite of the king of kings (*i.e.*, the Pāṇḍya king Neḍuñjaḍaiyaṉ). It is stated of this Māṟaṅgāri that he fought bravely in the fight that ensued between the kings of the Eastern country (*Pūrva-rājar*) and **Vallabha** on the occasion when the daughter of Gaṅgarāja (the Gaṅga king) was procured for **Koṅgar-kōṉ.**

Ll. 134 to 141 repeat that the owner of this *brahmadēya* (*viz.*, Vēḷvikuḍi) was **Kāmakkāṇi Śuvaraṉ-Śiṅgaṉ,** the headman of Koṟkai, by which perhaps the Naṟchiṅgaṉ, just mentioned, must be referred to. The composer of the Tamiḻ *praśasti* was the *Sēnāpati* **Ēnādi** *alias* **Śāttaṉ Śāttaṉ.** This brings us to the end of the Tamiḻ portion. The next Sanskrit verse speaking of the *ājñapti* of the grant says that he was **Maṅgalarāja Madhuratara,** a Vaidyaka and a master of the *Śāstras*, a poet and an orator. Then follow four imprecatory verses which are expressly stated to be quoted from the **Vaishṇava-Dharma.** A Tamiḻ prose passage coming after this says that the king himself ordered the engraving of this copper-plate grant and that the engraver was a certain **Yuddhakēsari Perumbaṇaikkāraṉ.**

In noticing these plates in his *Annual Report on Epigraphy* for 1908, pp. 50 ff., Mr. Venkayya has already made it clear how *Kalpa-kshayāt* in v. 4 has to be understood with reference to the traditional account of the deluge[3] or tidal wave in the Pāṇḍya country and to the survival of a king of the old Pāṇḍya line "of the race of the Moon and in all respects corresponding," under the name **Budha.** Similarly also, the mythical boast of the Pāṇḍya kings to have engraved their crest on the top of the Himalayas and to have shared one-half of Indra's throne and worn the garland of the king of the gods, has been shown to occur frequently in the later Pāṇḍya inscriptions. Palyāgamudukuḍumi-Peruvaḻudi is a historically famous Pāṇḍya king in whose honour

[1] The name of this Pallava king, which begins with *Śe*, is hopelessly damaged on the impression.

[2] Evidently the same mentioned in connection with the next king, his son Neḍuñjaḍaiyaṉ.

[3] Old Madura is supposed to have been washed away by the sea: see commentary on *Agapporuḷ*, p. 4.

five poems are known to have been sung by three famous Śaṅgam[1] poets and included in the Tamiḻ anthology called *Puṟanāṉūru*. In one of these he is stated to have captured the extensive forts of his enemies and to have destroyed and ploughed their streets with a team of white-mouthed asses. This way of dealing with the conquered countries seems to be a very old one. Dr. S. Konow points out that there is a reference to it in the Hathigumpha inscription of Khāravēla.[2] It is mentioned also in some inscriptions of the later Pāṇḍya king Māṟavarmaṉ Sundara-Pāṇḍya I. The Kaḷabhra occupation of the Madura country and the consequent interregnum are also noted by Mr. Venkayya with the remark that the Kaḷabhra may be the Karṇāṭa. After the interregnum came Kaḍuṅgōṉ with whom the first academy (Śaṅgam) of Tamiḻ poets is supposed to have come to an end. The list of the kings that followed Kaḍuṅgōṉ to the donor Neḍuñjaḍaiyaṉ is given in a genealogical table on p. 54 of the *Annual Report on Epigraphy* for 1908, together with further information supplied about them by two other sets of Pāṇḍya copper-plates[3] secured from Śiṉṉamaṉūr. Mr. Venkayya thinks that Neḍuñjaḍaiyaṉ of the Vēḷvikuḍi grant must be different from Neḍuñjaḍaiyaṉ of the Madras Museum plates published by him in the Indian Antiquary, not only on the strength of certain palæographical differences already noted above but also on account of the different engravers who in the one case was Yuddhakēsari Pāṇḍiya-Pperumbaṇaikkāraṉ and in the other, Pāṇḍi-Pperumbaṇaikkāraṉ *alias* Arikēsari. He further identifies Neḍuñjaḍaiyaṉ of the Vēḷvikuḍi plates with Māṟañjaḍaiyaṉ of the Āṉaimalai cave inscription; for, between these two there is not only palæographical similarity, but also it happens that the *ājñapti* of the former is the prime minister mentioned in the latter, both being called Māraṅgāri Mūvēndamaṅgalappēraraiyaṉ, members of the Vaidya (or Vaidyaka) family and natives of Karavandapura with the attributes *Maduratara* and *Kavi*. Consequently, the two kings Neḍuñjaḍaiyaṉ and Māṟañjaḍaiyaṉ, who both bore the same surname Parāntaka, must be identical and the date of the Vēḷvikuḍi grant must be about A.D. 769-70 which is the date of the Āṉaimalai inscription.

About the military achievements of Neḍuñjaḍaiyaṉ we learn from this inscription that he defeated the Kāḍava king at Peṇṇāgaḍam on the southern bank of the Kāvērī river and grove the Āyavēḷ and the Kuṟumbas in a battle fought at Nāṭṭukkuṟumbu. Again, a statement made about the *ājñapti* of the grant in lines 126-129, adds that Māraṅgāṟi rendered valuable service to his master Neḍuñjaḍaiyaṉ by defeating a certain Vallabha at Veṇbai, on the occasion when the eastern kings secured the hand of the Gaṅga princess in marriage for Koṅgarkōṉ. Here Koṅgarkōṉ in order to suit the context, must be taken to be a surname of the Pāṇḍya king Neḍuñjaḍaiyaṉ himself. This is not improbable, inasmuch as his grandfather Śaḍaiyaṉ is also called in the inscription (Text, *l.* 70), Koṅgarkōmāṉ, and his father Tēr-māṟaṉ is stated to have contracted relationship with the Gaṅga king (Text, *l.* 84). This latter event perhaps refers to the occasion when Māṟaṅgāri achieved the success mentioned above.

In spite of what Mr. Venkayya thinks about the identity of the kings mentioned in the Vēḷvikuḍi plates and the Madras Museum plates there are strong reasons to believe that both refer to the same king. For, the ruling king Parāntaka Neḍuñjaḍaiyaṉ and his *birudas* Paṇḍitavatsala, Vīrapurōga and Vikramapāraga occur in both. Further, the surname Śrīvaramaṅgala given to the granted village Vēlaṅguḍi in the Madras Museum plates makes it clear that the king must have also had the *biruda* 'Śrīvara' which we find actually given to him in the Vēḷvikuḍi plates.[4] The special mention of Mūrti Eyinaṉ in *l.* 136 of the Vēḷvikuḍi plates as

[1] According to tradition there were three *Śaṅgams* or old academies of Tamiḻ Poets. The date of the last of these has been widely discussed. The latest pronouncement on the subject is that it must have come into existence some time after the 5th Century A. D.

[2] *Acta Orientalia*, Vol. I, Part I, p. 23f.

[3] These plates are under publication by me in the *Epigraphia Indica.*

[4] Mr. K. V. Subrahmanya Ayyar also supposes it to be so; *vide* his *Sketches of Ancient Dekhan*, pp. 103 ff.

one of the fifty Brāhmaṇa sub-donees marks him out as an important personage. From the Ānaimalai inscriptions, we know that Eyinaṉ was an epithet or surname held by Māṟaṉ Eyinaṉ, the younger brother of Māṟaṅgāri himself. Perhaps Māṟaṉ Eyinaṉ and Mūrti Eyinaṉ were both younger brothers of Māṟaṅgāri. The *ājñapti* of the Madras Museum plates was Dhīrataran Mūrti Eyinaṉ, who was one of the *mahā-sāmantas* of the king. There is little doubt that Mūrti Eyinaṉ of our plates and Dhīrataran Mūrti Eyinaṉ of the Madras Museum plates are identical and that thus also the king Neḍuñjaḍaiyaṉ mentioned in both these sets of plates is one and the same. If this identification is accepted the two allied plates together supply the full list of the military exploits of Neḍuñjaḍaiyaṉ. By the third year of his reign (the date of the present grant) Neḍuñjaḍaiyaṉ must have subdued the Āyavēḷ and the Kuṟumbar and defeated the Pallavas south of the Kāviri; but before his 17th year (the date of the Madras Museum plates) he had carried his conquests right into the heart of the Koṅgu country and taken possession of it by defeating its king Adiyaṉ and his allies the Pallavas and the Kēraḷas. The conquest of the Koṅgu country and the desire to possess it seem to have been very strong with the Pāṇḍya kings. For, Śaḍaiyaṉ, the grandfather of Neḍuñjaḍaiyaṉ, held the title 'Lord of the Koṅgas' and his father Tēr-Māṟaṉ actually crossed the Kāviri, subjugated Maḷa-Koṅgam and had invaded that country even as far as Pāṇḍi-kKoḍumuḍi. Neḍuñjaḍaiyaṉ seems only to have followed in the footsteps of his ancestors in subduing the Koṅgabhūmi, as far as the land of the Gaṅgas. The information that a Gaṅga princess was married into the Pāṇḍya family is not mentioned in any of the Gaṅga records of this period which falls into the reign of Śivamāra I (755 to 765 A.D). The Vallabha or the Western Chalukya king who was defeated on this marriage occasion was probably Kīrtivarman II who succeeded to the Chalukya throne in A.D. 746 or 747 and whose army is stated in his records to have defeated the army of the Kēraḷas, the Chōḷas and the Pāṇḍyas.

From what is stated of the countries of Koṅgu and Kēraḷa in these inscriptions of Neḍuñjaḍaiyaṉ, it is not difficult to see that the former was bounded on the east and perhaps also on the north by the land of the Gaṅgas—the Gaṅgavāḍi 96,000 of the Western Gaṅgas of Taḷakāḍ and that on the south it extended far beyond Koḍumuḍi, as even to cover the northern portion of the later Rājāśarya-Vaḷanāḍu of the Chōḷas which included in it the present Musiri and the Trichinopoly talukas. Coimbatore was in the western division of the Koṅgu-maṇḍalam. The king of the Northern (*vaḍa*) Koṅgu was Adiyaṉ[1]—the Adigaimāṉ or Adiyamāṉ of later inscriptions whose capital was at Dharmapuri, the ancient Tagaḍūr, in the Salem district. The Kēraḷa country was situated on the west coast beyond the Sahyādri mountains and may have included also the southernmost portions of the present Coimbatore district. In the 8th century, therefore, it looks as if the Koṅgu king allied himself with the Pallavas in the north and the Kēraḷas in the south and tried to oppose the invasion of the Pāṇḍya Neḍuñjaḍaiyaṉ. The Vallabha was defeated by the Pāṇḍya general and a Gaṅga princess was married into the Pāṇḍya family perhaps as a political measure. It is stated that Pūrvarājar put to flight Vallabha. Māraṅgāri also fought on the same occasion. Perhaps the Pūrvarājar were the chiefs of Gaṅgavāḍi subordinate to the Western Gaṅga king who contracted marriage relations with the Pāṇḍyas.

Mr. Venkayya observes again in his Epigraphical Report that the title Arikēsari occurring in text-line 62, was borne by a certain Neḍu-Māṟaṉ who is mentioned in the commentary of Nakkīrar on *Iṟaiyanār-Agapporuḷ*. This latter work, as tradition says, was made available for the public by Nīlakaṇḍaṉār of Muśiri eight generations, *i.e.*, about two hundred years, after the actual date of Nakkīrar. Mr. Venkayya seems to have gone wrong in identifying Neḍu-Māraṉ of literature with Tēr-Māṟan of the Vēḷvikuḍi plates where, however, the characteristic title Arikēsari is not given to him. The other titles, too, are not applied to him and the

[1] See remarks on his Nāmakkal inscription in the Madras Epigraphical Report for 1906, p. 75 f.

battles fought by him as described in the commentary under reference, are not found in the eulogy of Tēr-Māṟaṉ given in the Vēḷvikuḍi plates. On the other hand, Māṟavarman, the great grandfather of the donor Neḍuñjaḍaiyaṉ, is not only called Arikēsari but is also stated to have fought victorious battles at Pāḷi, Śeṉṉilam and Nelvēli which same are mentioned of him in the commentary on the *Agapporuḷ*.[1] This mention, therefore, of the very same battles both in the plates and in the commentary, sufficiently warrants our identifying Neḍumāṟaṉ of the commentary with Māṟavarman, the great-grandfather of Neḍuñjaḍaiyaṉ and not with Tēr-Māṟaṉ. Nakkīrar has sung also of Neḍuñjeḻiyaṉ in *Puṟanāṉūṟu*, and it is not impossible that this Neḍunjeḻiyaṉ is identical with Śeḻiyaṉ, the father of Arikēsari Māṟavarman.

Of the six ancestors of Neḍuñjaḍaiyaṉ mentioned in the Tamiḻ portion of the inscription and the three immediate ancestors mentioned in the Sanskrit portion, we learn nothing more than that the first king Kaḍuṅgōṉ who came to rule after the Kaḷabhra interregnum was a **Pāṇḍy-ādhirāja**,[2] that the next Māṟavarman bore the title Avanichūḷāmaṇi and that the third Śēndaṉ, also called Śeḻiyaṉ and Vāṉavaṉ, was probably identical, as stated above, with Neḍuñjeḻiyaṉ of the *Puṟanāṉūṟu* fame. The fourth king, whose military achievements are given in detail, was Śrī-Māṟavarman Arikēsari Asamasaman, who in addition to the victorious battles mentioned already, destroyed the Paravas and the people of Kuṟu-nāḍu. The fifth Śaḍaiyaṉ, also called Raṇadhīra, was the lord of the Koṅgas, fought battles against the Āyavēḷ at Marudūr, and with the Mahārathas at Maṅgalapura; and the sixth, Tēr-Māṟaṉ or Rājasiṁha, defeated Pallavamalla, perhaps at Kuḻumbūr, and fought battles at Neduvayal, Kuṟumaḍai, Maṇṇikuṟichchi, Tirumaṅgai, Pūvalūr, Koḍumbāḷūr and Periyalūr and subjugated the country of Maḻa-Koṅgam as far as Pāṇḍi-kKoḍumiḍi. He contracted relationship with Gaṅgarāja, marrying the daughter of the Gaṅga prince to his son Neḍuñjaḍaiyaṉ, himself having married the daughter of the king of the Maḻavas.[3] The fact that he defeated Pallavamalla shows that Tēr-Māṟaṉ must have been a contemporary of that king and lived about A.D. 710-760.[4]

As regards the territorial terms and village names that occur in the inscription, Pāgaṉūr-kūṟṟam is identical with the division of that name in which the village Śōḻavandāṉ near Madura was included.[5] Maḻava is identical with **Maḻa-nāḍu.**[6] Kuṟu-nāḍu, and the granted village Vēḷvikuḍi, and the villages **Nagarūr, Koṟṟanputtūr** and **Pāyal** mentioned in the description of the boundaries of the latter cannot be identified. Koṟkai is the well-known seaport of that name in the Tinnevelly District. Of the villages Nelvēli, Śeṉṉilam, Puliyūr (in Kēraḷa), Marudūr, Maṅgalapura, Neḍuvayal, Kurumaḍai, Maṇṇikuṟichchi, Tirumaṅgai, Pūvalūr, Śeṅguḍi, Pudāṅgōḍu, Koḍumbāḷūr, Kuḻumbūr, Periyalūr, Pāṇḍikkoḍumiḍi, Kūḍal Vañji, Kōḻi, Peṇṇāgaḍam, Nāṭṭukkuṟumbu, Karavandapuram and Veṇbai,—Nelvēli is Tinnevelly;

[1] *Ibid.*, pp. 129 ff.

[2] Describing the several grades of rulers, *the Kāmikāgama* states that an *adhirāja*—*ādhirāja* is the form which the inscription uses throughout the Tamiḻ portion—holds the second rank among kings:—

चतुस्समुद्रपर्यन्तं पृथिवीं यः प्रपालयेत्।
चक्रवर्ती समाख्यातः स्वराज्यं प्रपालयेत् ॥
अधिराजस्समाख्यातः

(*Hindu Iconography*, Vol. I, Part I, p. 29 n.)

[3] Maḻava is identical with the old Maḻa-nāḍu or Rājāśraya-Vaḷanāḍu (see *S. I. I.*, Vol. II, Introduction, p. 24, and *Historical Sketches of Ancient Dekhan*, p. 129).

[4] Udayachandra, the general of Nandivarman Pallavamalla, also claims in the Udayēndiram grant to have defeated the Pāṇḍya at Maṇṇaikkuḍi (*S. I. I.*, Vol. II, p. 368, Text, *l.* 60 f.). Perhaps we may have to identify Maṇṇaikkuḍi with Maṇṇikuṟichchi which is mentioned in the Tamiḻ portion (Text, *l.* 73 f.) as one of the places where Tēr-Māṟaṉ was victorious.

[5] No. 127 of the Madras Epigraphical Collection for 1910.

[6] See above note 3.

Marudūr is perhaps **Tiruppudaimarudūr** near **Ambāsamudram**; **Maṅgalapuram** of the Mahārathas might be **Mangalore**; Koḍumbāḷūr is in the Pudukkōṭṭai State; **Pāṇḍikkoḍumiḍi** is the village **Koḍumuḍi** near Karūr a station on the South-Indian Railway; **Kūḍal** is **Madura**; Vañji is **Karūr**[1]; Kōḻi is **Woraiyūr** near Trichinopoly; **Peṇṇāgaḍam** is in the Tanjore District; and Karavandapuram is the modern **Kaḷakkāḍ** in the Tinnevelly District.

TEXT.[2]

First Plate.

Svasti[3] [||*]

1 Śriyañ=chiraṁ vaś=śiśir-āṁśu-śēkharaś=**Śiva[ḥ*]** śrit-ārtti-pratibandha-kāraṇam [|*] tanōtu sauvarṇṇa-kapa-

2 rdda-sundaraṅ=kudarppa-Kandarppa-mada-pramarddanaḥ ௨ [1*] Viśvambharā-bhara-śrānta-śēsha-viśrāma-kāraṇam [1*] ā-

3 kalp-āntam=bhuvi sthēyād=anvayaḥ=**Pāṇḍya**-bhūbhṛitām ௨ [2*] Astambhayat-kshiti-dharam=pravijṛimbhamāṇam=ambha-

4 s=samastam=apibaj=jaladhēś=cha yas=saḥ [|*] **Kumbh-ōdbhavō** bhavati yasya muniḥ=purōdhās=sa śrī-nidhi-

5 r=jjayati Pāṇḍya-narēndra-vaṁśaḥ ௨ [3*] Asthād=apratima-prabhāva-mahitaḥ=Pāṇḍy=ābhidhānō nidhē-

6 r=vvārādhvāri[4] mahīpatis=tribhuvanō līnē=pi kalpa-kshayāt [|*] Dhātrā srishṭa-vatā punas=sa

7 jagatāṁ rakshārtthaṁ=abhyarthitas=tējasvī tanayatvam=ētya śaśinō nāmnā **Budh**=ākhyō=bhavat ௨ [4*]

Second Plate; first side.

8 Putras=tasya **Purūravā** bhuja-bala-pradhvasta-daityaḥ=prabhus=tad-vaṁśē Śikharīn-dra-mastaka-śi-

9 lā-vinyasta-matsya-dvayē [|*] Śakr-ārddh-āsana-hāra-bhāji śaraṇē viśvasya viś-vambharā-gēha-

10 svāmini śāśvatō yudhi jit-āśēsh-āmar-āri-prabhau ௨ [5*] Dūtībhūta-divōkasi[5] kshitidhara-kshu-

11 bdh-ābhisaṁkshōbhita-kshīr-ōdanvati Kumbha-sambhava-kara-prāpt-ābhishēka-kriyō [|*] isht-ārtth-ārppaṇa-

12 tarppit-ārtthi-janat-āpūrṇṇa-kshamā-maṇḍalō janm=āvāpa jaga[6]-tray-ārchchita-guṇa[ḥ*] śrī-**Māravarmmā** nṛi-

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[1] Pandit Raghava Aiyangar of Ramnad has proved from copious references to literature that the earliest Vañji is Karūr. But an inscription at Dhārāpuram mentions the town Koṅgu-Vañji, suggesting thus, another Vañji which was perhaps the earlier and the capital of Chēra.

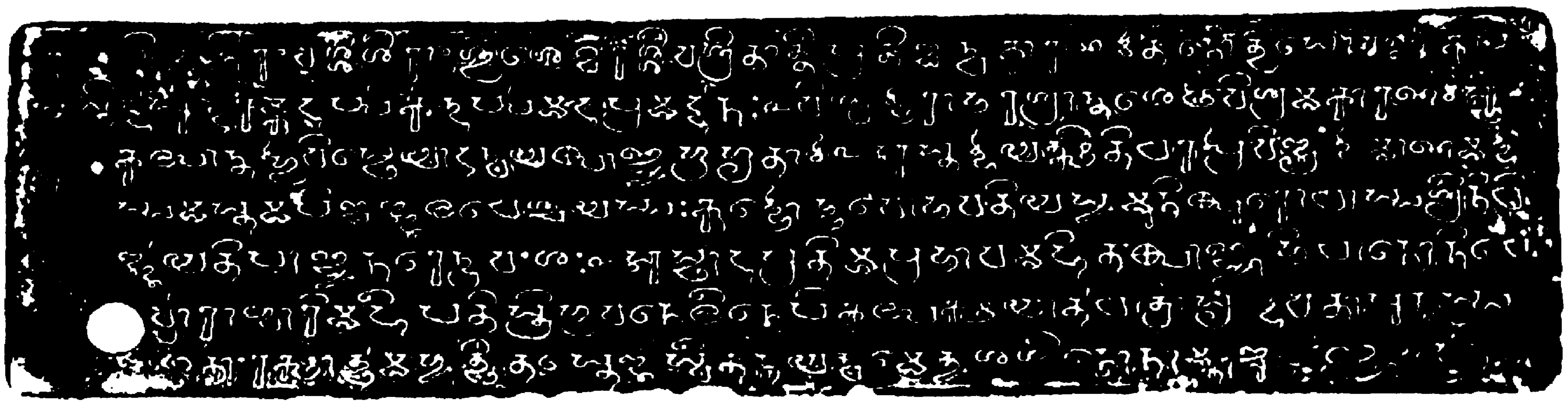
[2] From two excellent impressions supplied by Dr. Fleet to Mr. Venkayya in 1893 and another supplied by Dr. L. D. Barnett to me in 1915.

[3] These two syllables are written on the left margin of the plate.

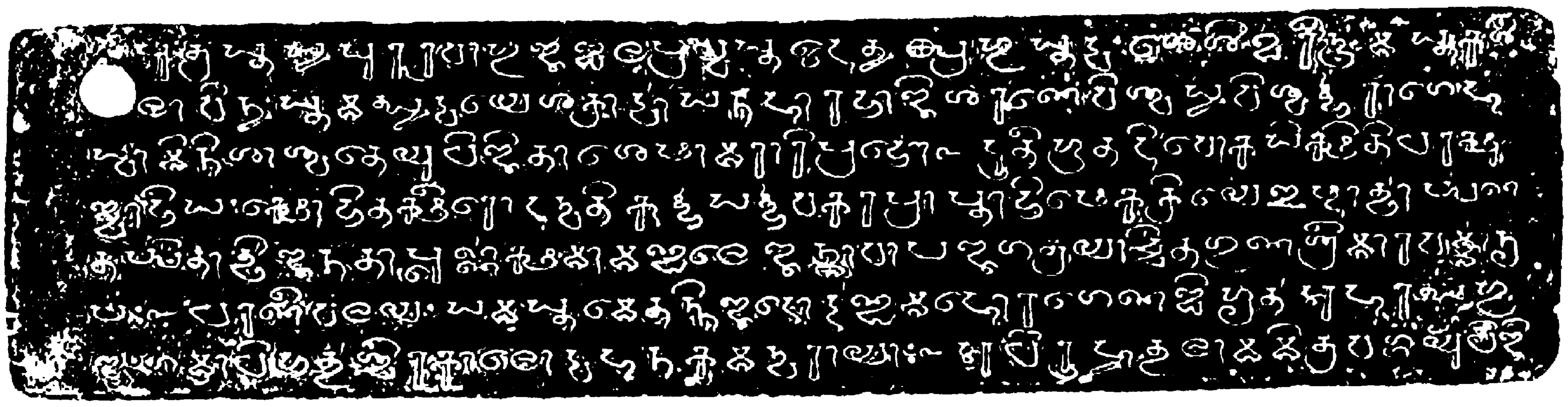
[4] Read °r-vvārān=avāri. [5] Read -divaukasi. [6] Read jagat°-.

Velvikudi Grant of Nedunjadaiyan : the 3rd year.

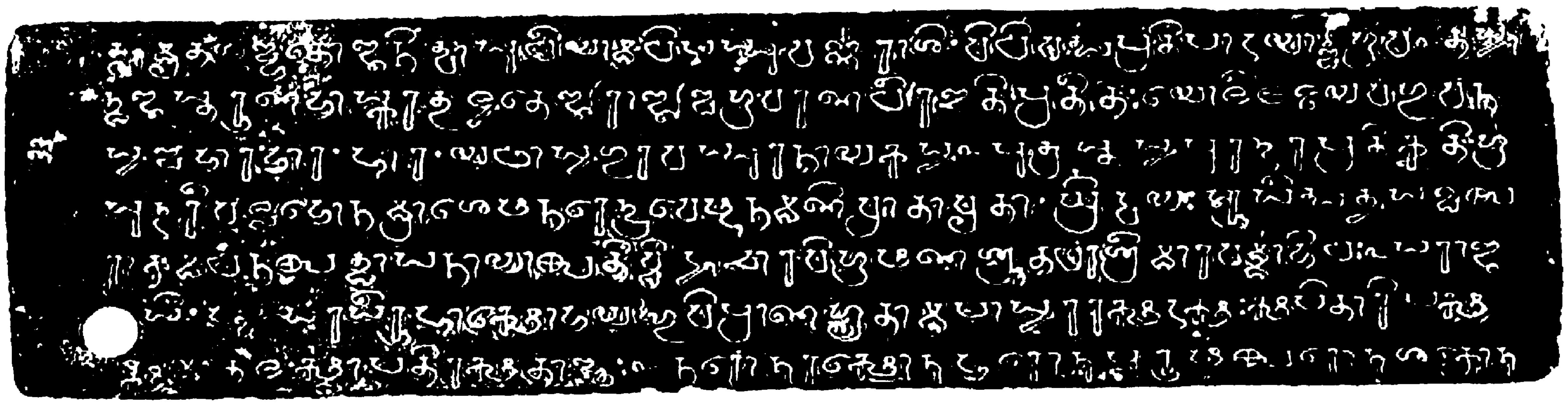
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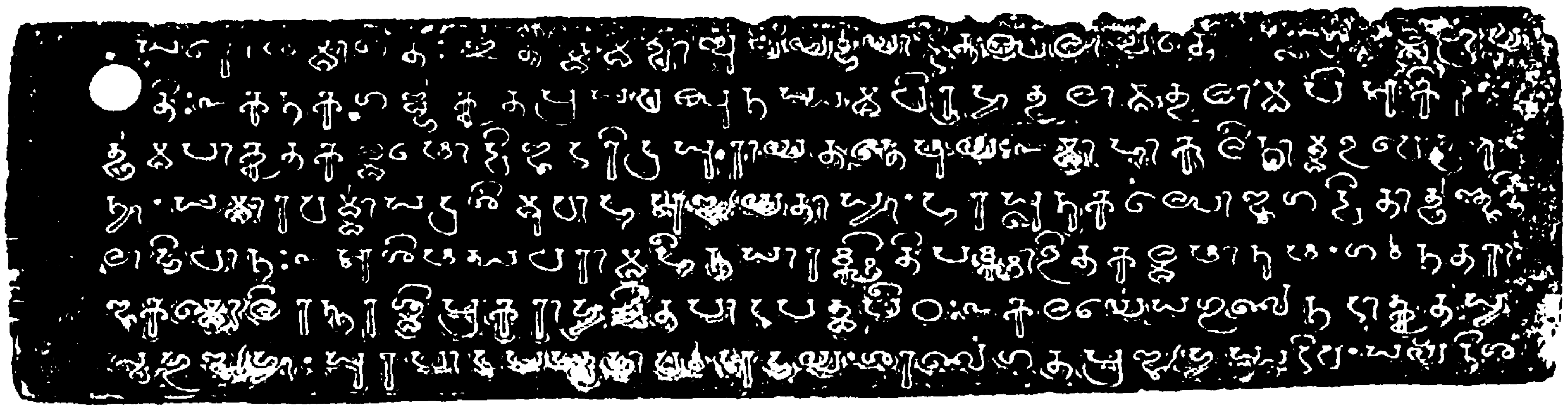
ii a



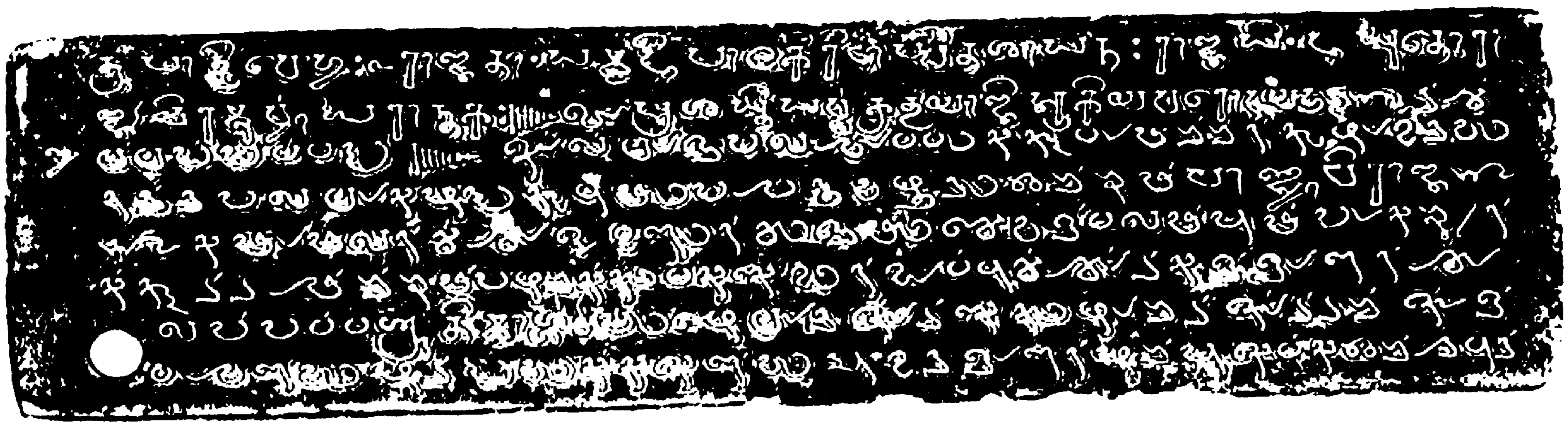
ii b.



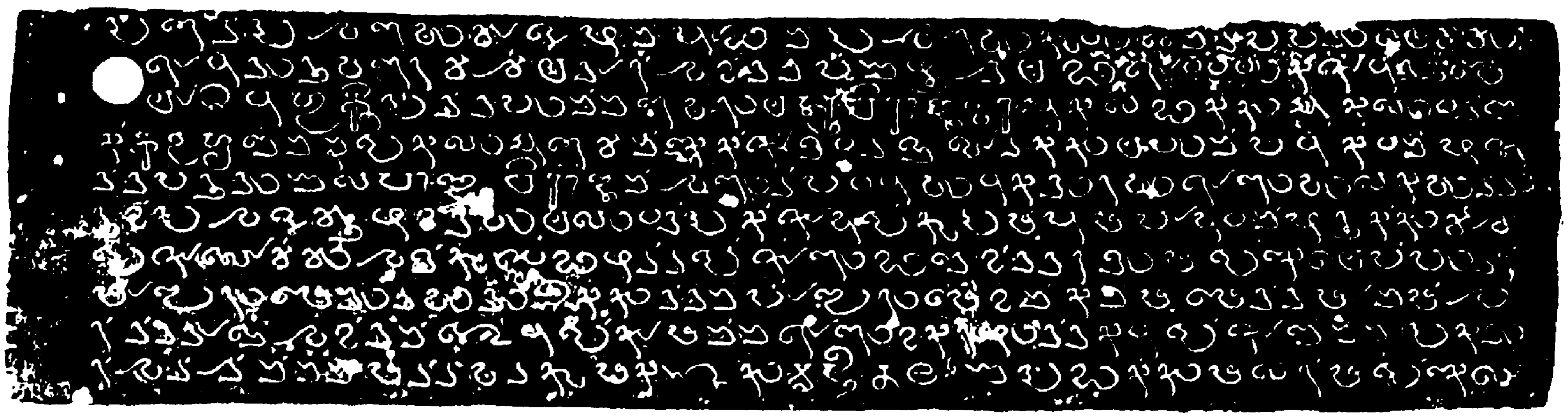
iii a



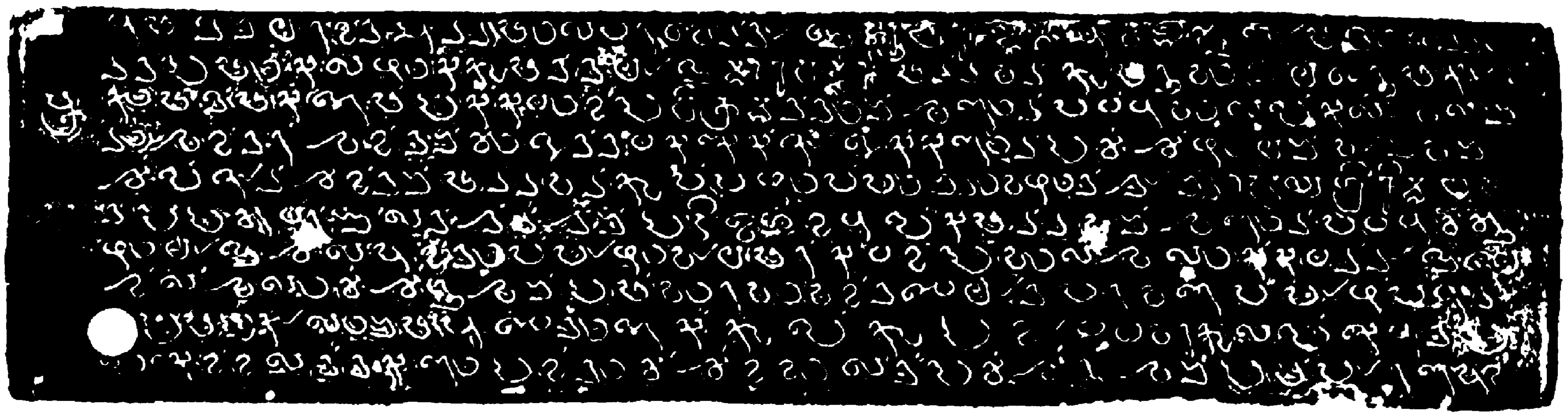
iii b.



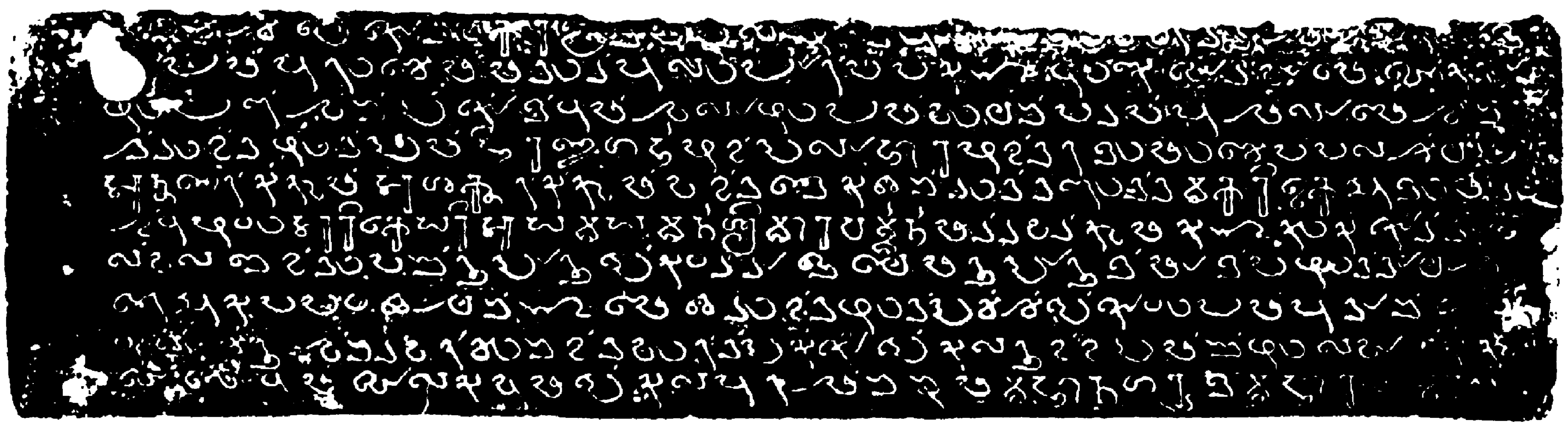
iv a.



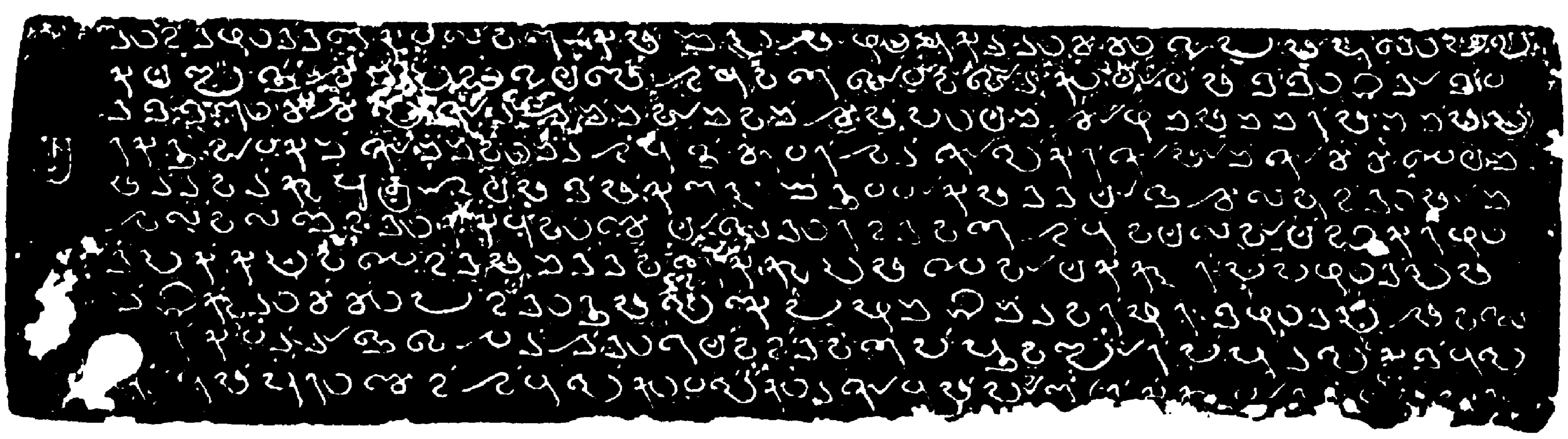
iv b.



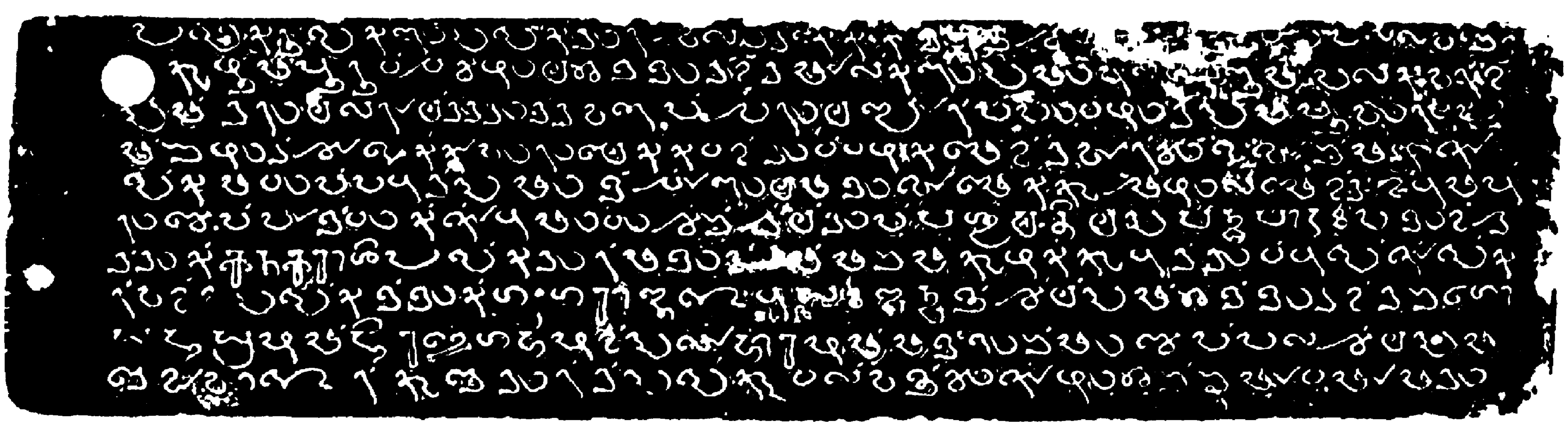
v a.



v b.



vi a.



13 Paḥ 2 [6*] Dharaṇî-valayaṁ samastam=ētan=nija-dōrddaṇḍa-mah-ōrag=ṇa bibhṛit[1] [|*] aharat=sa bhu-

14 jaṁgam-âdhibhartuś=chira-kâl-ōdvahana-klaman=dharâyâḥ 2 [7*] Adhiruhya tulâm=a-mitra-varggaṁ=yudhi ji-

Second Plate ; second side.

15 tv=Âmṛita-garbbhatō janitvâ [|*] sudhiyâm=adhipas=suvarṇṇa-râśiṁ vidhivat=sa pratipâdayâm-babhûva [2 [8*] Tasy=â-

16 [2]nmajas=taruṇa-bhâskara-tulya-tējâ râjâ babhûva Raṇadhîra iti pratîtaḥ [|*] yō lîlay=aiva bhuvana-

17 sya babhâra bhâraṁ hâraṁ yath=âsya guravas=suranâyakasya 2 [9*] Putras=tasya Purandara-pratikṛitir=bhû-

18 sundarî-vallabhō namr-âśēsha-narēndra-vēshṭana-maṇi-vrât-âvṛit-âṁghri-dvayaḥ [|*] âsît=satya-sakhaḥ=pa-

19 râkrama-dhanaḥ=[3]patmâsanâyâḥ=patir=vvidy-âchâra-vibhûshaṇa[ḥ*] śruta-[dha]ra[ḥ*] śri-Mâravarmm=âbhidhaḥ 2 [10*] Sa Râja-

20 siṁhas=sarasîruh-âkshō bhayam bhuvi prâṇa-bhṛitâm=apâsya [|*] raraksha dakshaḥ kshapit-âri-paksha-

21 [4]ḥ=kshamâtalaṁ kshmâ-patir=akshat-âjñaḥ 2 [11*] Narō nu Rakshō nu Harō-nu Pûrushaḥ=parō nu Śakrō nu

Third Plate ; first side.

22 sarōsham=âgataḥ [|*] iti [sma] matvâ yudhi yam=bhay-â[rddi]taḥ=[pa]lâyatē [Pallava]malla-bhûpa-

23 tiḥ 2 [12*] Kanaka-garbbha-kṛita-prasavaḥ=punas=samadhiruhya tulâm=atulâm=api [|*] akira[t=â]-

24 rttham=apâkṛita-kalmashō dvija-daridra-sur-âyatanē=shu yaḥ 2 [13*] Mâhâ[5]-kulînâm=Maḷav-ēndra-[ka]-

25 nyâṁ sa Mâravarmmâ sadṛaśîm[6]=uvâha [|*] ajâyat=âsyâṁ Hara-sûnu-kalpō jagad-dhitârtthañ=Jaṭi-

26 l-âbhidhânaḥ 2 [14*] Aśishat=sa dharâm=ahîna-sâraṁ=kshitipaṁ=kshâḷita-[7] kalmash-ânushaṁgam [|*] nata-râ-

27 jaka-mauli-ranna[8]-raśmi-prakar-âbhyarchchita-pâda-patma[9] pîṭhaḥ 2 [15*] Khalayē sa guṇân=adât=Kṛitasya

28 sva-bhujâbhyâṁ sura-pâdapa-svabhâvam [|*] abhayaṁ śaraṇâgata-prajâbhyas=sa divaṁ saṁyati śa-

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[1] Read *bibhrat*.
[2] Read °*tmaja*°.
[3] Read *padmâ*°.
[4] Read *pakshaḥ kshamâ*°.
[5] Read *Mahâ*.
[6] Read *sadṛiśîm*.
[7] Read *kshitipaḥ kshâ*°.
[8] Read *ratna*.
[9] Read *padma*.

Third Plate ; second side.

29 tru-pārtthivōbhyaḥ 2. [16*] **Rājatāṁ** sa mahīpāla-kirīṭ-ārppita-śāsanaḥ [|*] **Rājasiṁha-sutō** rā-

30 jā chiram=urvyām=**Parāntakaḥ** ||||— [17*] I-praśasti **Sarvvakratu-yāji** āgiya **Varōdaya-Bhaṭṭaṉār**=che-

31 yyappaṭṭadu | ||||— Kol-yāṉai-palav=ōṭṭi-kkūḍā-maṉṉar-kuḷān=tavi-

32 rtta **Palyāga-Mudukuḍumi=pPeruvaḻudi** eṉṉum **Pāṇḍyādhirājaṉā**=

33 ṉāga-mā-malar-chchōlai-naḷir-śiṉaimiśai-vaṇḍ-alambum **Pāgaṉūr-**

34 **kkūṟṟam**[1]=eṉṉum paḻaṉa-kkiḍakkai-nīr-nāṭṭu=chchoṟkaṇṇāḷar-śo-

35 lappaṭṭa śrutimārggam-piḻaiyāda **Koṟkai-kiḻā=Naṟkoṟṟaṉ** koṇ-

36 ḍa vēḷvi muṟṟuvikka kēḷvi-andaṇāḷar muṉbu kēṭka eṉṟ=eḍut-

Fourth Plate ; first side.

37 t=uraittu vēḷviśālai-muṉbu niṉṟu **Vēḷvikuḍi** eṉṟ=a-ppadiyai=chchī-

38 rōḍu tiru-vaḷara=chcheydār [||*] Vēndaṉ=appoḻudēy nīrōḍ=aṭṭi-kkoḍuttamai-

39 yā=ṉīḍu-bhukti [2]tuttapiṉṉ[||*]=Aḷav-ariya ādhirājarai agala nīkki agal-iḍattai=

40 **kKaḷabhraṉ**=eṉṉuṅ=**Kali-araiśaṉ** kaikkoṇḍ=adaṉai iṟakkiyapiṉ[|| *] Paḍu-kaḍaṉ-muḷai

41 tta parudi-pōla **Pāṇḍyādhirājaṉ** veḷiṟpaṭṭu viḍu-kadir-avir-oḷi vilaga vīṟṟi-

42 rundu vēlai-sūḻnda-viyal-iḍattu=kkōvuṅ=kuṟumbum pāvuḍaṉ murukki=chche-

43 ṅkōl=ōchchi veṇ-kuḍai-niḻaṟ-ṟaṅg-oḷi-niṟainda Taraṇi-maṅgaiyai=ppiṟar-

44 pāl=urimai tiṟavidi=ṉīkki=ttaṉpāl=urimai naṉgaṉam=amaitta māṉam-pē-

45 rtta-tāṉai-vēndaṉṉ=oḍuṅgā-maṉṉar-oḷi-nagar=aḻitta **Kaḍuṅgōṉ**=eṉṉuṅ=kadi-

46 r-vēṟ-**Teṉṉaṉ** [||*] Maṟṟ=avaṟku magaṉ-āgi mahītalam podu-nīkki Malar-maṅgai[y*]-o-

Fourth Plate ; second side.

47 ḍu maṇaṉ=ayarnda aṟam-il-aḍar-vēṟ-ṟāṉai-**Ādhirājaṉ** **Avaṉichūḷāmaṇi** etti-

48 ṟattum=igal-aḻikku=matta-yāṉai **Māravarmman** [||*] **Maṟṟ=avaṟku** maruv=iṉiya oru-magaṉ-ā-

49 gi Maṉ-magaḷai maṟu=kkaḍindu vikramattiṉ veḷiṟpaṭṭu **vilaṅgal-vēl-po-**

50 ṟi-vēndar-vēndaṉ **śilai-ttaḍa-kkai=kkolai-kkaḷiṟu=chChēliyaṉ Vāṉavaṉ**

51 śeṅkōṟ-**Chēndaṉ** [||*] Maṟṟ=avaṟku=ppaḻipp-iṉṟi vaḻi-ttōṉṟi Udayagiri-madhyama-

52 tt=uṟu-śuḍar-pōla=tteṟṟ-eṉṟu diśai naḍuṅga maṟṟ=avaṉ veḷiṟpaṭṭu=chchū-

53 ḻi-yāṉai śelav=undi=p**Pāḻivāy**=amar-kaḍandu **Vilvēli-kkaḍaṟ-ṟāṉaiyai**

54 **Nelvēli**-chcheru veṉṟum viṟavi-vand=aḍaiyāda **Paravarai**=ppāḻ-paḍut-

55 tum=aṟukāl-iṉam puḍai tiḷaikkuṅ=**Kuṟunāṭṭavar-kulaṅ**=keḍuttu-

56 ṅ=kai-nnalatta-kaḷiṟ=undi=ch**Chennilattu**-chcheru veṉṟum pār-aḷavun=

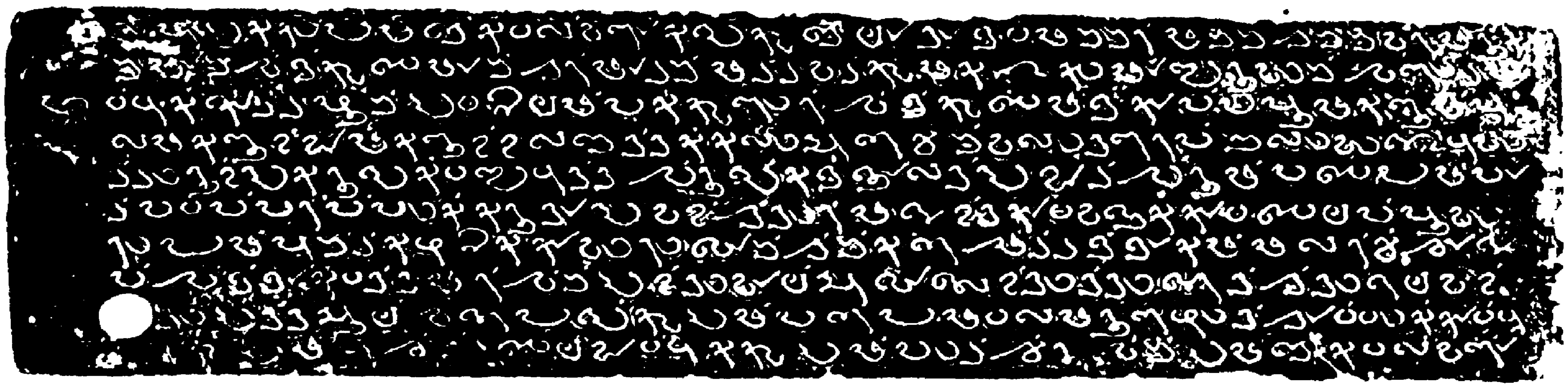
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[1] The *puḷḷi* is marked over *me*.

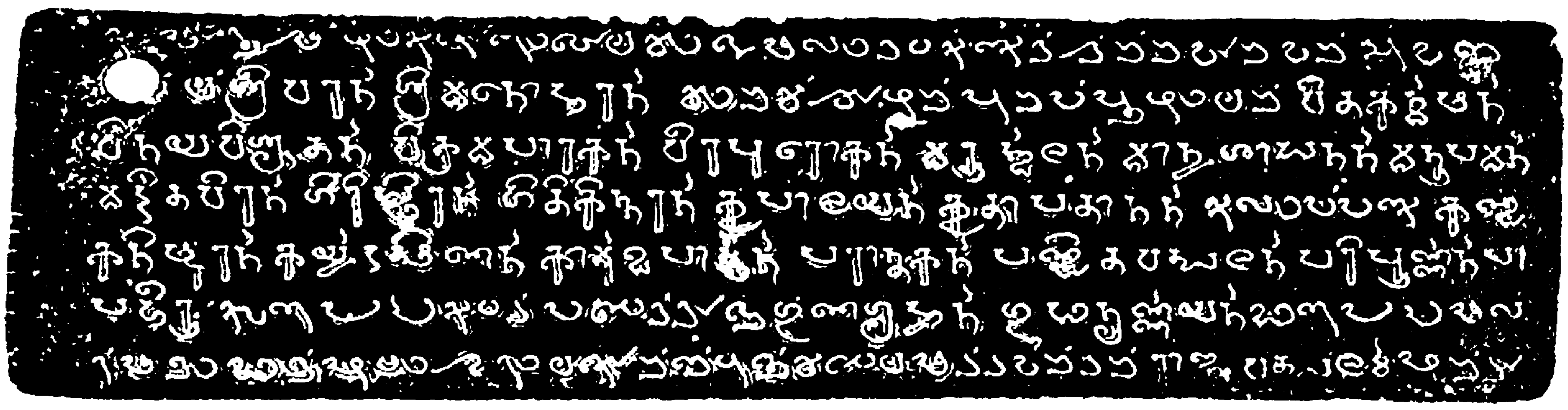
[2] Read *tuyttu*°.

Velvikudi Grant of Nedunjadaiyan : the 3rd year.

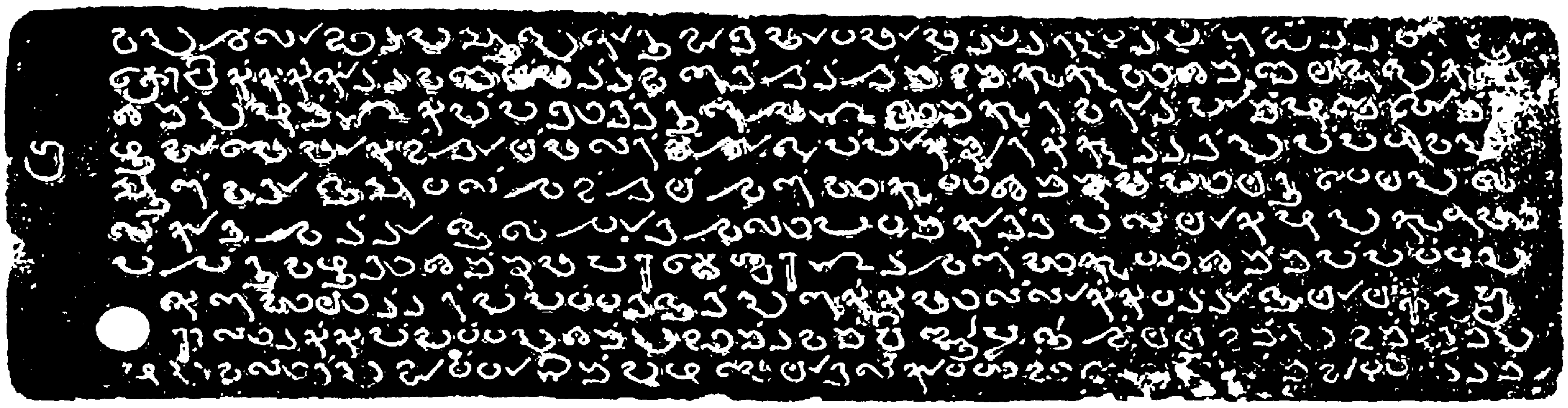
vi b.



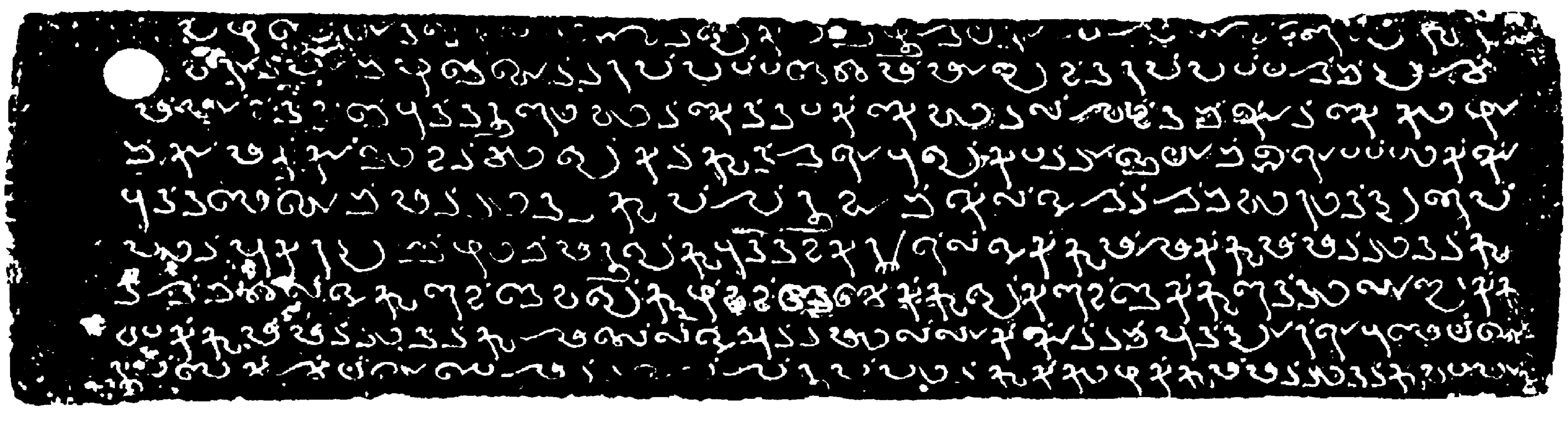
vii a.



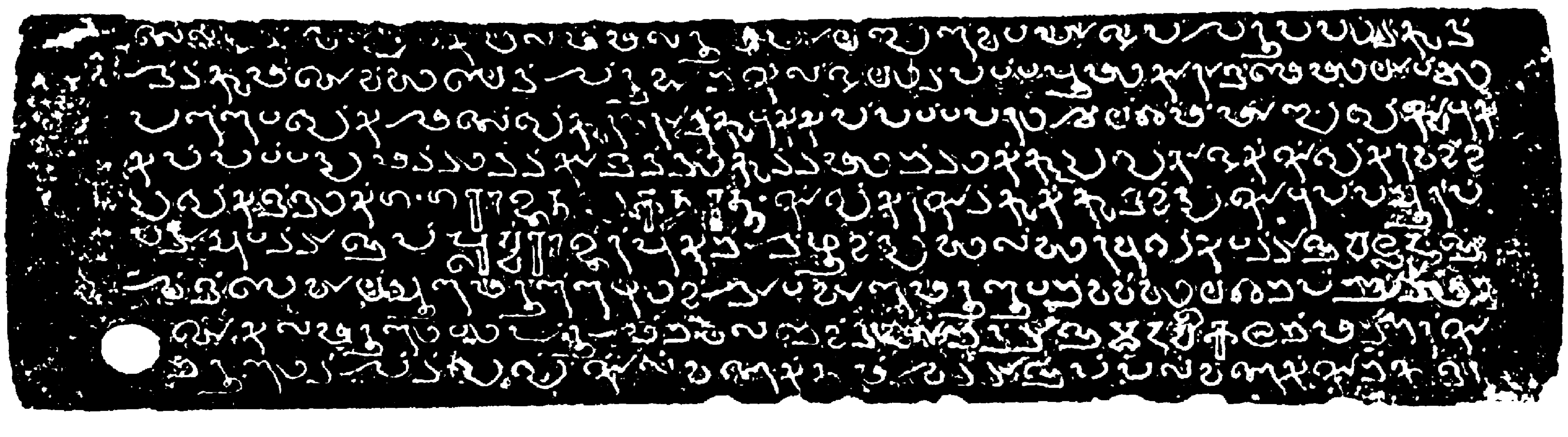
vii b.



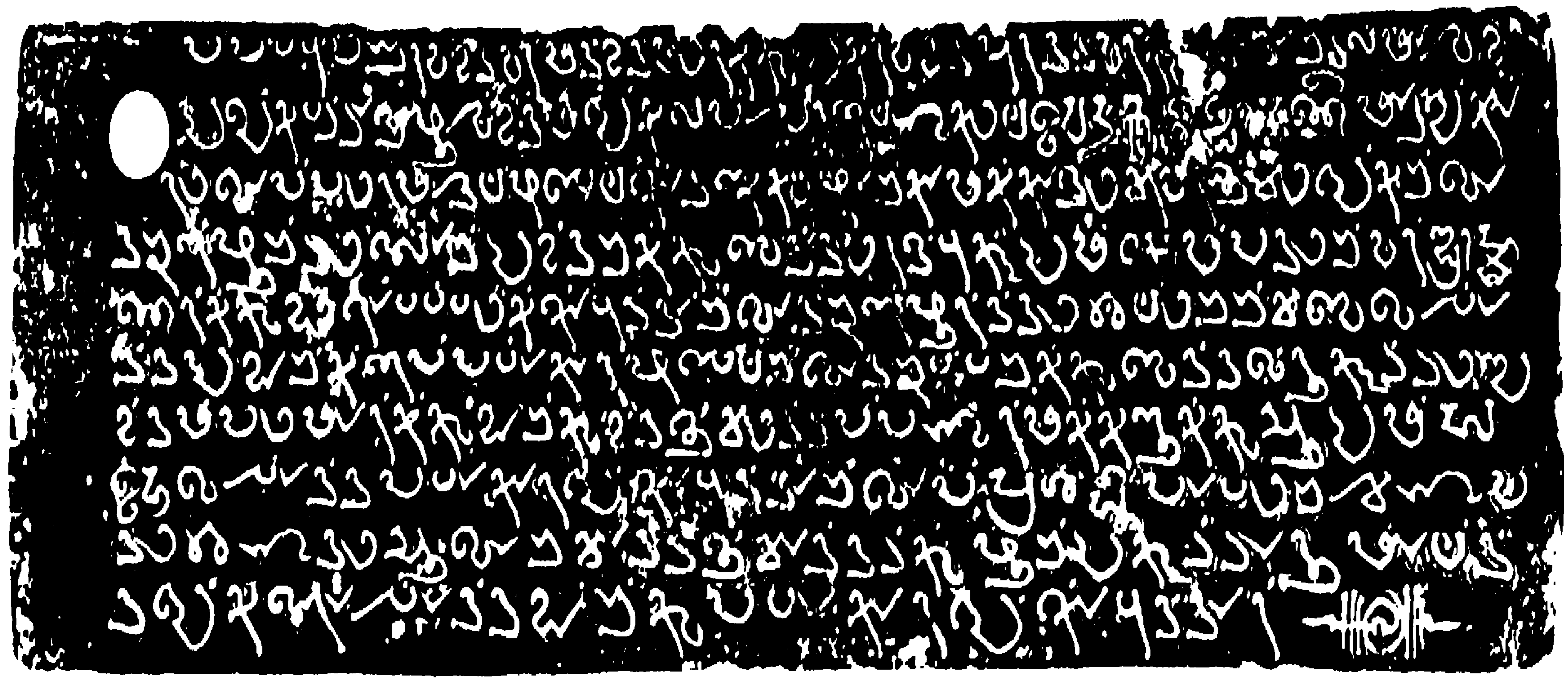
viii a.



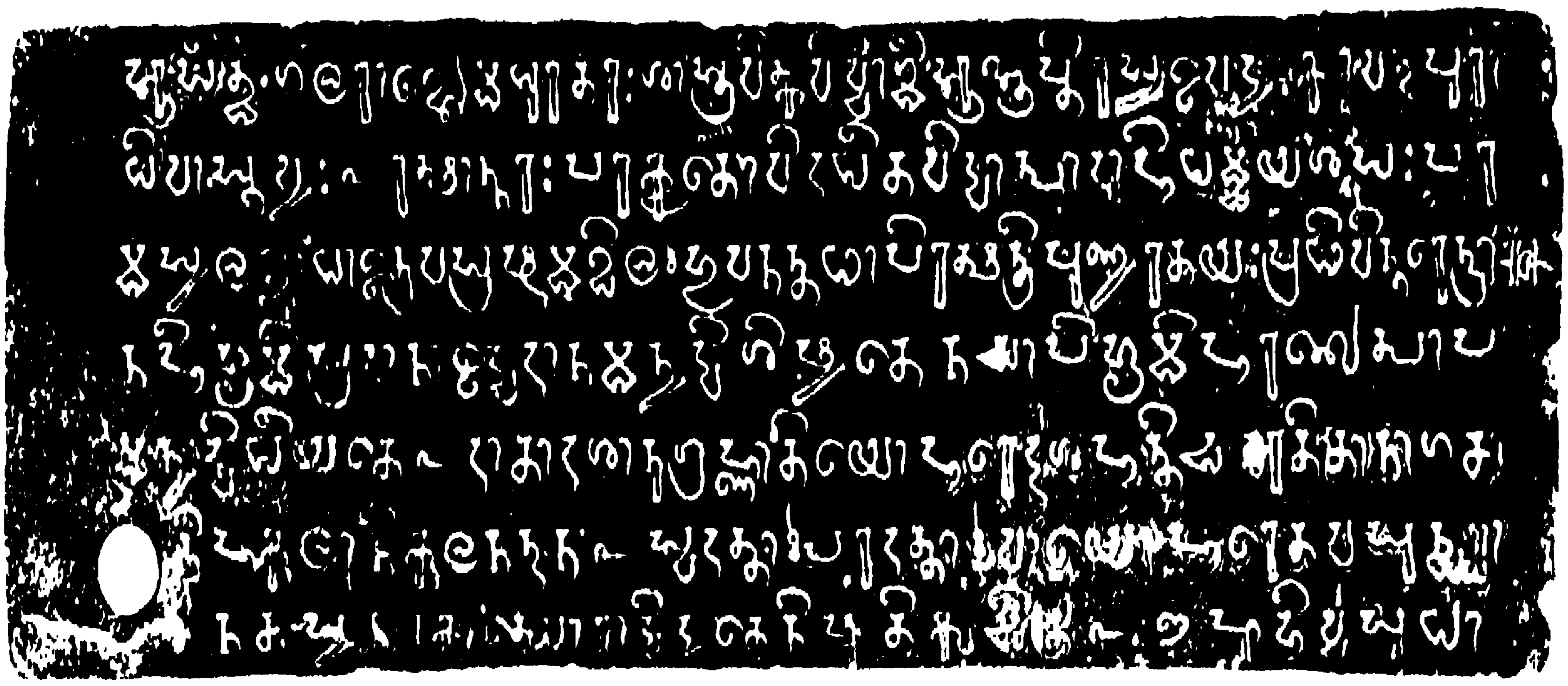
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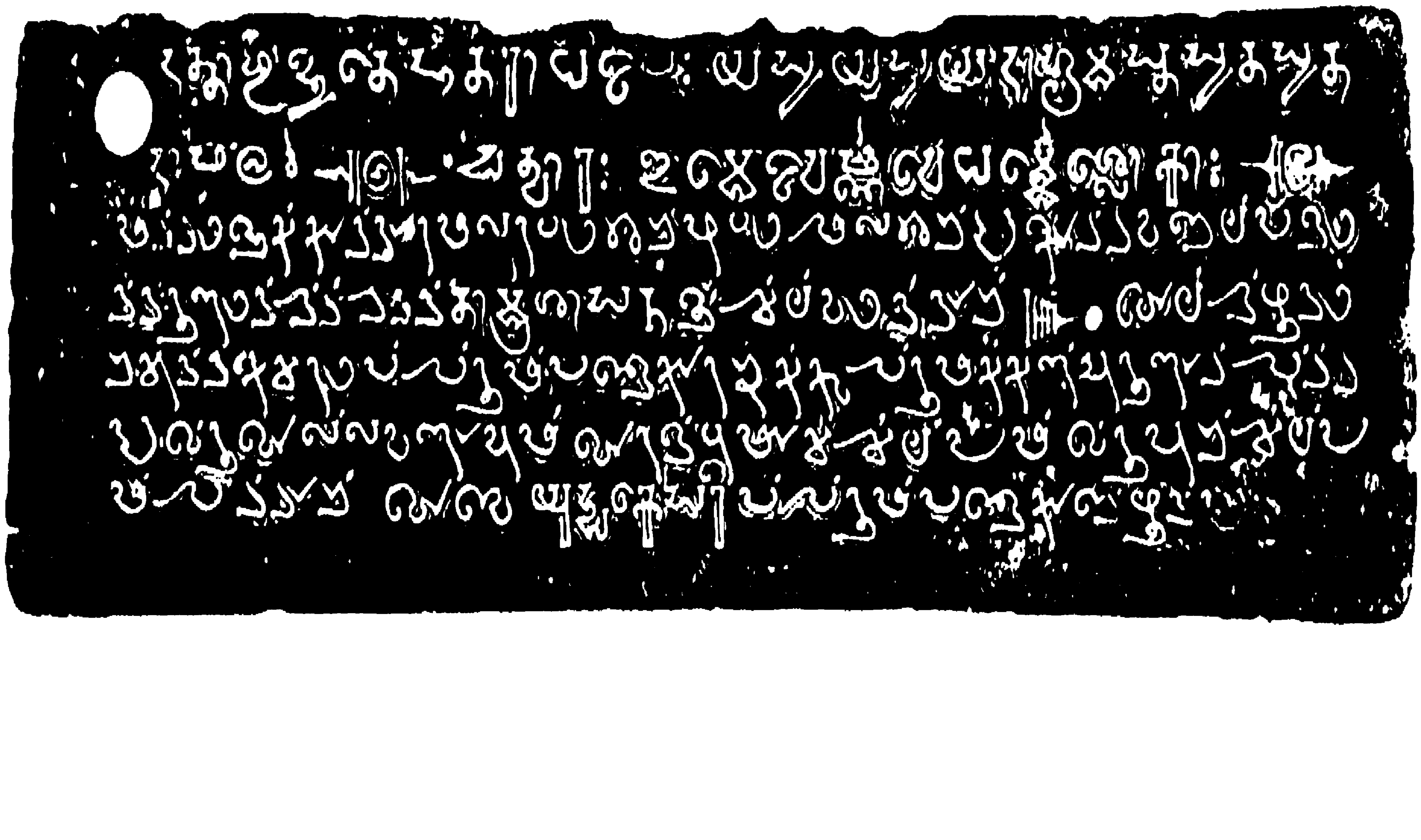
ix a



ix b.



x.



Fifth Plate ; first side.

57 [ta]ni-chchenkōr-**Kēraḷaṉai**=ppala-mu[raiyum=urimai]-chchuṟṟam[ōḍ=avar-yā]ṉai-

58 [y*]um puriśai-mmadiṟ-**Puli[y*]ūr**=ppaga-ṉāḷigai iṟa[v]āmai iṟa[l-ā]-

59 ḷi[y*]uḷ veṉṟu koṇḍum vēl-āḷi[y*]um viyaṉ-parambum=ēlāmai śeṉ-

60 ṟ=erind=aḷittum Hiraṇyagarbhamun=Tulābhāramun=daraṇimiśai=ppala śey[du]

61 antaṇarkkum aśaktarkkum vand=aṇaiga eṉṟ=itt=aḷitta makarikai-aṇi-maṇi-

62 neḍu-muḍi-**Arikēsari** **Asamasaman** **śrī-Māravarmman** [||*] Maṟṟ=avaṟku magaṉ-
āgi=kkoṟṟa-vē-

63 l valaṉ-ēndi=pporud=ūruṅ-kaḍaṟ-ṟāṉaiyai **Marudūruṉ** māṉb=aḷitt=**Āyavē-**

64 **ḷai** agappaḍa ey=eṉṉāmai erind=aḷittu=ch**Cheṅgoḍi[y*]um** **Pudāṉ[kō]ṭ-**

65 ṭuñ=cheru veṉṟ=avar-śiṉan=tavirttu=kkoṅg-alarun-naṟum-poḻilvāy=kku-

66 [y*]i[lo]ḍu ma[y*]il=agavu=**Maṅgalapuram**=eṉṉum mahā-nagaruṉ **Mahārathara**i e-

Fifth Plate ; second side.

67 ṟind=aḷitt=aṟai-kaḍal-vaḷāgam podu-moḻi agaṟṟi=chchilai[y*]um puli[y*]um

68 kayaluñ=cheṉṟu nilaiy-amai-neḍu-varai-iḍava[y*]iṟ=kiḍāy maṉṉ=iṉid-āṇḍa

69 taṉṉ-aḻi-chcheṅkōṟ-**Ṟeṉṉa**=**Vāṉavaṉ** **Śembiyaṉ** **Śōḻaṉ** maṉṉar-maṉṉa[ṉ*] madu-

70 ra-**Karuṇāḍagaṉ** koṉ-naviṉṟa neḍuñ-chuḍar-vēṟ-**Koṅgar-kōmāṉ** kō=ch**Chaḍaiyaṉ**
[||*]

71 Maṟṟ=avaṟku putraṉāy Maṉ-magaḷadu poruṭṭāga matta-yāṉai śelav=undi māṉa-

72 vēl valaṉ-ēndi=kkaḍu-viśaiyāl=edirndavarai **Neḍuvayalvāy** nigar=aḻi-

73 ttu=kkaṟuv-aḍainda maṉattavarai=k**Kuṟumaḍaivāy**=kkūrpp=aḻittu **Ma-**

74 **ṇṇikuṟichchi[y*]un**=**Tirumaṅgai[y*]u**=muṉṉiṉṟavar muraṇ=aḻittu mēvalō-

75 r-kaḍaṟ-ṟāṉai[y*]ōḍ=ēṟṟ=edirōy vandavarai=p**Pūvalūr**=ppuṟaṅ-gaṇḍuṅ=

76 koḍum-puriśai-nneḍuṅ-kiḍaṅgiṟ-**Koḍumbāḷūr**=kkūḍār-kaḍum-pari-

Sixth Plate ; first side.

77 [y*]uṅ=karuṅ-kaḻiṟuṅ=kadir-vōliṟ=kaikkoṇḍuñ=**Chēva** . . . [kū]ḍāda **Pallavaṉai**=k

78 **Kuḷumbūruṭ**=ṭōśaḻiya eṉṉ-iraṇḍa māl-kaḻiṟum=ivu[ḷiga]ḷum pala kavarn-

79 dum tariyalarāy=ttaṟittavarai=p**Periyalūr**=ppiḍ-aḻittum pūviri[y*]u-

80 m-poḻiṟ-chōlai-k**Kāviriyai**=kkaḍandiṭṭ=aḻag-amainda vār-śilai[y*]iṉ **Maḻa-Ko-**

81 **ṅgam**=aḍippaḍuttu mīṇḍ=oḻiya-maṇi-imaikkum=eḻil-amainda neḍum-pu-

82 riśai=p**Pāṇḍi**kkoḍumuḍi śeṉṟ=eydi=p**Paśupatiyadu** panma-pādam paṇind=ē-

83 tti=kkanaka-rāśi[y*]uṅ=kadir-maṇi[y*]um mana-maguḷa[1]=kkuḍuttiṭṭuṅ=koṅga-

84 r-van-naṟuṅ-kaṇṇi-k**Gaṅga**[2]-**rājaṉoḍu** sambandhañ=cheydum eṉṉiraṇḍaṉa **Go-**

85 sahasramum **Hiraṇyagarbhamun**=**Tulābhāramum** maṉṉiṉmiśai=ppala śeydu ma-

86 ṟai-nāviṉōr kuṟai-tīrttuṅ=**Kūḍal** **Vañji** **Kōḻi** eṉṉu=māḍa-mā-madi-

Sixth Plate ; second side.

87 l pudukki[y*]um=aṟai-kaḍal-vaḷāgaṅ=kuṟaiyād-āṇḍa maṉṉar-maṉṉa[ṉ*]=**Ṟeṉṉavar-**
maruga-

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[1] Read *magiḻa*.

[2] Read *kKaṅga*.

88 ṉ māṉa-veṉ-kuḍaimāṉ=**Rēr-Māṟaṉ** [||*] Maṟṟ=avaṟku magaṉ-āgi **Māl-uruviṉ** veḷiṟpa-
89 ṭṭu=kkoṟṟa-mūṉṟ=uḍaṉ=iyamba=kkuḷir-veṉ-kuḍai maṉ **kāppa** **Pū-magaḷum** Pu-
90 la-magaḷum **Nā**-magaḷun=malaṉ=ōtta=k**Kali**-araiśaṉ vali taḷara=ppoliviṉoḍu vī-
91 ṟṟirundu karuṅ-kaḍal-uḍutta peruṅgaṉ-ñālattu nāṟ-perum-paḍai[y*]um pā-
92 ṟpaḍa=pparappi=kkarudādu vand=edir-malainda **Kāḍavaṉai**=kkāḍ-aḍaiya=ppā-vi-
93 ri[y*]um-puṉaṟ-kaḷani-k**Kāviri**[y*]iṉ=ṟeṉkaraimēṟ=ṟaṉṉ-āgam-malar-chchōlai-
94 p**Peṇṇāgaḍatt**=amar veṉṟun=tī-vāy-a[y*]il=ōndi=ttiḷaitt=edirēy van-
95 d=iṟutta **Āyavēḷai**[y*]**uṅ**=**Kurumbarai**[y*]**um**=aḍal-amaruḷ=aḷitt=ōṭṭi=kkāṭṭu-
96 [k]kuṟumbu śeṉṟ-aḍaiya **Nāṭṭukkuṟumbiṟ**=cheru v[e]ṉṟum=aṟai-kaḍal-vaḷā-

Seventh Plate ; first side.

97 gam=oru-moḻi=kkoḷīiya śilai-mali-taḍa-kkai **Teṉṉa**=**Vāṉavaṉ** avaṉō-
98 y **Śrīvaran** Śrī-manōharan **Śiṉachchōḻaṉ** **Puṉappūḻiyaṉ** vītakanmashan[1]
99 vinayaviśrutan[2] vikramapārakan vīrapurōkan marudbalan mānyaśāsanan **Manūpaman**
100 mardditavīran giristhiran gītikinnaran kṛipālayan kṛitāpatānan **Kalippagai** kaṇḍa-
101 kanishṭuran[3] kāryadatshiṇan[4] kārmukha[5]-Pārtthan **Parāntakan** **Paṇḍitavatsalan** paripūrṇṇan pā-
102 pabhīru kurai-uṟu-kaḍaṟ-paḍai-ttāṉai- guṇagṛihyan gūḍhaniṟirṇṇayan[6] nirai-uṟu-mala-
103 r-maṇi-nīṉ-muḍi-**Nēriya**[**r***]kōṉ=**Neḍuñjaḍaiya**[**ṉ***] [||*] Maṟṟ=avaṉṟaṉ **rājya-vatsalam**[7] **mūṉṟā-**

Seventh Plate ; second side.

104 **vadu** śelāniṟpa āṅg=oru-nāḷ=māḍa-mā-madiṟ-**Kūḍaṟ**-pāḍu niṉṟavar ā-
105 krōdhikka=kkoṟṟavaṉēy maṟṟ=avarai=tteṟṟeṉa naṉgu kūvi eṉṉēy nuṅ=**kuṟai**
106 eṉṟu muṉṉāga=ppaṇitt-aruḷa mē-ṉā=ṉiṉ-kuravarāṟ=pāṉ-muṟai[y*]iṉ va-
107 ḻuvāmai māgan-tōy=malar-chchōlai=p**Pāgaṉūr-kkūṟṟattu**=ppaḍuvadu
108 āḷva-tāṉai-aḍal-vēndēy **Vēḷvikuḍi** eṉṉum piyar-uḍaiyadu o-
109 ḷgāda vēṟ-ṟāṉai[y*]oḍ=ōda-vēli uḍaṉ kātta **Palyāga-Mudukuḍumi-**
110 **pPeruvaḻudi** eṉṉum **Paramēśvaraṉāṟ**[8] **Vēḷvikuḍi** eṉṉappaṭṭadu
111 kēḷviyiṟ=ṟarappaṭṭadaṉai=ttuḷakkam-illā kaḍaṟ-ṟāṉaiy=āya **Kaḷabhra-**
112 **rāl**=iṟakkappaṭṭadu eṉṟu niṉṟavaṉ vijñāpyañ=cheyya naṉṟu naṉṟ=eṉṟu
113 muṟuvalittu nāṭṭā=ṉiṉ paḻamaiyādal kāṭṭi nī [koḷgav=eṉ]ṉa nāṭṭ[ā]ṟ=ṟaṉ

Eighth Plate ; first side.

114 paḻamaiyādal kāṭṭiṉāṉ=aṅg=appoḻudēy kāṭṭa mē-ṉāḷ=e[ṅ]-kura-
115 varāṟ=pāṇmuṟai[y*]iṟ=ṟarappaṭṭadai emmālun=tarappaṭṭad=eṉṟu śe-
116 mmānd=avaṉ=eḍutt-aruḷi viṟ-kai-ttaḍa-kkai-viṟal-vēndaṉ **Koṟkai-kiḻā-**
117 ṉ **Kāmakkāṇi** **Naṟchiṅgaṟku**=ttēr-ōḍuṅ=kaḍaṟ-ṟāṉaiyāṉ=nīrōḍ=aṭṭik[ko]-
118 ḍuttamai[y*]iṉ maṟṟ=idaṟku=pperu-nāṉg-ellai teṟṟeṉa viritt=uraip-
119 piṟ=pugar-aṟu-poḻiṉ=maruṅg=uḍutta **Nagarūr**-ellaikkum mēkkum maṟṟ=idaṟku-

[1] Read °*kalmashan*. [2] The original has the impossible combination °*viśṛiutan*. [3] Read °*nishṭhuran*. [4] Read °*kāryadakshiṇan*. [5] Read *kārmuka*°. [6] Read *gūḍhanirṇayan*. [7] Read °*vatsaram*. [8] Read *ṉāl*.

120 tt[e]ṉ ellai **Kuḷandaivaṅ**-Kūḷvandai-śe[y*]**kkuṅ=Kaḷandai**-kkuḷattil=ālnkk[u]

121 vaḍakkum maṟṟ=idaṟku mēl-ellai aṟṟam-illā=**kKoṟṟaṉputtū(r)r**-Oḍumaiy-i-

122 ruppai-chchey-iḍai mēṟṟalai=pperuppiṟku=kkiḻakkum maṟṟ=idaṟku vaḍapā-

Eighth Plate ; second side.

123 l-el[lai kāya]luṭ=kamalam malarum **Pāyaluḷ** vaḍapālai=pperuppiṟku=t-

124 teṟkum ivv=iyait[ta*] peru-nāṉg-ellaiyiṟ-paṭṭa pūmi kārāṇmai mīyāṭchi

125 uḷḷ-aḍaṅga mēl=oṅ-guravaṟāṟ=kuḍukkappaṭṭa pariśōy emmāluṅ=[ko]ḍuk-

126 kappaṭṭadu [||*] Maṟṟ=idaṟk=āṇatti kuṟṟam-iṉṟi=kkūṟuṅkālai=kkoṅgar-van-na-

127 ṟuṅ-kaṇṇi-[1]**kGaṅgarājanudu** kanyā-ratnam **Koṅgarkōṟku**-kkuṇandu koḍuppa āṟp-

128 p-aṟā-aḍaṟ-ṟāṇai-**pPūrvvarājar** pugaṉṟ=eḻundu vil-viravuṅ=kaḍaṟ-ṟāṇai-[**Va**]**llabhaṉai**

129 **Veṇbaivāy** āḷ-amaruḷḷ=aḻind-ōḍa vāḷ-amaruḷ=uḍaṉ=vavviya ēṉa-ppoṟi[2]

130 igal-amaruḷ=iḍi-urum-eṉa valaṉ-ēnda [malai]tta-tāṇai-**Madavīkalaṉ**[3] maṇṇar-kō-

131 ṉ-aruḷiṟ=peṟṟuṅ=kol-vaḷaikkum-vēṟ-ṟāṇai-ppal-vaḷai-kkōṉ kuṇara-

Ninth Plate ; first side.

132 ppaṭṭu=ppōr-vandavar-madan=tavirkkuṅ=**Karavandapurattavar**-ku[la-t]tōṉṟal māv=ēn-

133 duṅ = kaḍaṟ - ṟāṇai - **Mūvēndamaṅgalappērarai[ya]ṉ** = āgiya **Vaidyaka-śikhāmaṇi Māṟaṅgā-**

134 **ri** [||*] I-ppiramadēyam-uḍaiya **Koṟkai-kiḻāṉ Kāmakkāṇi Śuvaraṅ-Jiṅgaṉ** i-

135 daṉuḷ mūṉṟil-oṉṟun=taṉakku vaitt=iraṇḍu-kūṟum aimpadiṉvar Brāhma-

136 ṇarkku nīrōḍ=aṭṭi=kkoḍuttāṉ [|*] Idaṉuḷ **Mūrtti Eyiṉaṉ** śavai[y*]ōḍ=o

137 ttadu nāṉg-arai-ppaḍāgāram-uḍaiyaṉa [|*] Idaṉuṭ=ṭaṉakku vaitta oru-kūṟrilu-

138 n=tambimārkku nāṉgun=taṅ=chiṟṟappaṉār-makkaḷukku āṟum sa-

139 bhai[y*]ōḍ=otta paḍāgāraṅ=koḍuttāṉ [|*] I-ppraśasti pāḍiṉa **Sēṇāpa-**

140 **ti Ēṇādi** ā[y*]iṉa **Śāttaṅ-Chāttaṟku** mūṉṟu kūṟṟārum-āy=t-

141 taṅgaḷōḍ=otta nāṉgu paḍāgāraṅ=koḍuttār ||[4]

Ninth Plate ; second side.

142 **Āsīt**[5]**=Maṅgalarājō Madhuratarah** śāstravit=kavir=vvāgmī[|*] ājñaptir=asya **Vaidyaḥ Karavandapur-ā-**

143 dhivāstavyaḥ ॥ [18*] [6]Ratshān=naraḥ parakṛitau vidadhīta vidvān=pādā hi **Dharmma** yaśasaḥ para-

144 masya labdhā[ḥ*] [|*] Dhātr=aiva [7]srashṭam=akhilam [8]bhuvanan=tath=āpi ratshantri[9] puṇyaratayaḥ [10]prathivīn=narēndrā[ḥ] || [19*] ||[4]

145 **Na** hi bhūmi-pradānād=vai dānam=anyad=viśishyatē [|*] na ch=āpi bhūmi-haraṇāt pāpa-

146 m=anyad=vidhīyatē ॥ [20*] **Dātā** daś=ānugrahṇāti[11] yō harēd=daśa hanti cha [|*] atīt-ānāgatā-

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[1] Read *kKaṅga*°.

[2] These two syllables are written over an erasure.

[3] Read °*vikalaṉ*.

[4] For the ornamental form of the punctuation, see Plate.

[5] On the use of *tsha* for *ksha*, see above, p. 1.

[6] Read *Āsīn*=.

[7] Read *sṛishṭam*=.

[8] Read *bhuvanaṁ*.

[9] Read °*nti*.

[10] Read *pṛi*°.

[11] Read *gṛi*°.

147 ni=ha kulāni kula-nandana 2 [21*] Sva-dattām para-dattām vā yō haṇēta vasundharā-

148 m [|*] na tasya [na]rakāt[1]=ghōrād=vidyatē nishkṛitiḥ kvachit 2 [22*] Bahubhir=vvasudhā

Tenth Plate.

149 dattā bhujyatō h[i] [2]tarādhipaiḥ [|*] yasya yasya yadā bhūm[i]s=tasya tasya ta-

150 dā phalam [23*] ||[3] chatvāraḥ imē **Vaishṇavē Dharmē ślōkāḥ** ||[3]

151 Maṟṟ=i[da*]ṉai=kkāttār malar-aḍi eṉ muḍi mōla eṉṟu koṟṟavaṉēy paṇi-

152 tt-aruḷi-tteṟṟeṉa=ttāmra-śāsanañ=cheyvittāṉ ||||— Iyd=eḻudi-

153 ṉa **Śuttakēśari=pPerumpaṇaikāraṉukku** perumakkaḷ aruḷāṟ=peṟṟa-

154 du oru illa-vaḷāvam iraṇḍu mā=chchey[y*]um oru puṉchey[y*]u-

155 m peṟṟāṉ ivai **Yuddhakēsari=pPerumbaṇaikā[ra*]ṉ=eḻuttu** [||]

TRANSLATION.

(Verse 1). Hail! May Śiva, whose head-ornament is the cool-rayed (moon); who is the (primeval) cause for the cessation of the sufferings of the devoted, who is beautiful with matted hair of golden hue, and who crushes the mischievous pride of **Kandarpa** (Cupid); grant you perpetual happiness.

(V. 2). May the line of **Pāṇḍya kings**, the cause of rest to (the serpent) **Śēsha**, who is fatigued by bearing the burden of the Earth (*on his heads*), prosper on this earth to the end of the *kalpa*.

(V. 3). Victorious is the race of **Pāṇḍya** kings, the mine of prosperity, whose family priest is the sage **(Agastya)** born of the pitcher, who stopped the rapidly growing mountain from (*further*) growth, and drank all the water of the ocean.

(V. 4). There was (*ruling*) at the entrance into the sea a king famed for his matchless prowess, named **Pāṇḍya**, who, even after the three worlds had disappeared at the end of the *kalpa*, was requested again to rule the worlds by the Creator who created (*these*) anew, and was born as the splendid son of the **moon** and named **Budha**.

(Vv. 5 and 6). His son was **Purūravas**, who crushed the kings of giants by the strength of (*his*) arm; in his family which had engraved the pair of fish (*its crest*) on the topmost rock of the lord of mountains (*i.e.*, Mēru); whose (*kings*) shared with Śakra (*i.e.*, Indra) half of his throne and his necklace; which was the asylum of the universe; which was the husband of the earth; which was everlasting; which in battles defeated completely the powerful enemies of the gods; whose messengers were the gods; who stirred and churned the milk-ocean by the mountain (Mandara); the crowning ceremony (*of whose kings*) was performed by the hand of the pitcher-born (sage Agastya); and which had filled the circle of the earth with supplicants whose hearts were gladdened by the granting of their desires, was born the glorious king **Māravarman**, whose virtues were praised by the three worlds.

(V. 7). Bearing on his big serpent-like shoulder the whole circle of this earth, he removed the fatigue of the lord of serpents (*i.e.*, Śēsha)) (*which had been caused*) by the carrying of the earth for a long time.

[1] Read *rakād=*. [2] Read *dha°*. [3] For the ornamental form of the punctuation, see Plate.

(V. 8). He, the patron of the learned, conquered enemy crowds in battles and ascended the scales; came out of the nectar womb (*of the cow*); and according to rule, gave away heaps of gold[1].

(V. 9). His son was the king called **Raṇadhīra**, whose prowess was equal to that of the youthful sun and who bore the burden of the earth as sportively as his ancestors wore the necklace of (Indra), the chief of the gods.

(V. 10). His son was the glorious king named **Māravarman**, a counterpart of Purandara (Indra); the dear lord of the beautiful lady, earth, whose pair of feet was surrounded by the collection of gems in the crowns of all kings bowing in obeisance; whose friend was truth; whose wealth was prowess; the lord of the goddess of prosperity (Padmāsanā); who was an ornament of learning and good conduct and a depository of sacred knowledge.

(V. 11). That lotus-eyed **Rājasiṁha**, the king of the whole earth, driving away the fear of created beings on earth, ably protected the earth unopposed (*after*) destroying the allied enemies.

(V. 12). "Is he Nara (*i.e.*, Arjuna); is he a giant; is he Hara (*i.e.*, Śiva); is he the Primeval Man (Vishṇu); is he Śakra (Indra) come with anger?" thus thinking of him, in the battle-field, the frightened king **Pallavamalla** runs away (*from him*).

(V. 13). Who being made to be born of the womb of the golden (*cow*) and having again ascended the matchless scales, was freed of (*his*) sins and showered freely (*his*) wealth on Brahmans, beggars and temples.

(V. 14). This (*king*) Māravarman suitably married the daughter of the **Maḷava** king of high birth; and from her was born, for the good of the world, (*the king*) named **Jaṭila** almost equal to Skanda the son of Śiva.

(V. 15). That king of great strength ruled the earth clearing it of (*all*) associations of corruption; the footstool of his lotus feet was worshipped by the great lustre proceeding from the gems on the crowns of prostrating kings.

(V. 16). I imagine that he lent (*his*) virtues to the Kṛita (golden age); (he lent) to the celestial tree its nature, from his hands; to the subjects who sought refuge (*in him*), his promise of protection; and to the enemy kings on the battle-field, heaven.[2]

(V. 17). May he be long glorious on earth, king **Parāntaka**, the son of **Rājasiṁha**, whose commands are borne on the crowns by rulers of earth.

(L. 30). This *praśasti* was composed by **Varōdayabhaṭṭa** who was a performer of all sacrifices (*Sarvakratuyājin*).

(L. 31). **Naṟkoṟṟaṉ**, the headman of **Koṟkai**, who never transgressed the path of the *Śrutis* as interpreted by the highly learned (*men*) of the division called **Pāganūr-kūṟṟam**,—a well-watered land of extensive paddy fields, where the beetles buzzed on cool buds in groves blooming with the Nāga and the mango (*trees*),—being desirous of completing a (Vedic) sacrifice begun (*by him*), through (*the favour of*) the **adhirāja** of the Pāṇḍyas called **Palyāgamudukuḍumi-Peruvaḷudi**, who dispersed the crowd of the enemy kings by leading numbers of ferocious elephants (*against them*), the *kēḷvi*-Brāhmaṇas, in presence (*of the king*) saying

[1] These are the gifts which kings are expected to make on their coronation or on obtaining conspicuous victory in battles. They were also expiatory in character. See below, v. 13.

[2] The nature of the celestial tree is to give whatever is wanted and the hands of the king were giving away gifts on a very liberal scale. To give enemy kings heaven means to kill them on the battle-field and by so doing to send them to heaven.

"Please hear (O king)" explained the petition (of **Naṟkoṟṟaṉ**), stood in front of the sacrificial hall and blessed that spot to grow in prosperity under the name **Vēḷvikuḍi**.[1]

(L. 38). The king at once gave it with libations of water and it was since long (*so*) enjoyed.

(L. 39). Then a **Kali**[2] king named **Kaḷabhraṉ** took possession of the extensive earth driving away numberless great kings (*ādhirāja*) and resumed the (*village mentioned*) above.

(L. 40). After that, like the sun rising from the expansive ocean, the **Pāṇḍyādhirāja**, named **Kaḍuṅgōṉ**, the lord of the South of sharp javelin who wore (the cloak of) dignity and was the leader of an army, sprang forth, occupied (the throne), spreading round him the brilliant splendour of (*his*) expanding rays (*prowess*), destroyed the kings of the extensive earth surrounded by the sea together with (their) strongholds and (their) fame, wielded the sceptre (*of justice*) and removed by his strength the evil destiny of the goddess of Earth whose splendour deserved to be under the shade of (*his*) white umbrella, by terminating by his strength[3] the possession of her under others and establishing her in his own possession in the approved manner and destroyed the shining cities of kings who would not submit to him.

(L. 46). Then came his son **Avanichūḷāmaṇi Māṟavarmaṉ**, who removed the common ownership of the earth (by making it his own), who was wedded to the goddess (born) of the flower (*i.e.*, Lakshmī), the leader of a faultless army of fighting spearsmen, and the infuriated elephant who destroyed by all (possible) means the power (of enemy kings).

(L. 48). Then came his son, a lovely one and incomparable, the just ruler, **Śeḻiyaṉ Vāṉavaṉ, Śēndaṉ**, the lord of the hill-chiefs who throw weapons (dexterously), who removed the spot[4] from the goddess of the earth, who became well known by his prowess and who possessed long hands (holding) the bow, and furious elephants.

(L. 51). Then to him (was) born, a son,[5] **Arikēsari, Asamasamaṉ Śrī-Māṟavarmaṉ**, whose high jewelled crown was adorned with ornamental hangings; who, like the brilliant Sun from the middle of the eastern mountain, came out spreading his rays, causing the quarters to tremble; won the battle at **Pāḻi** by driving into the field of battle caparisoned elephants; conquered the ocean-like army of **Vilvēli**[6] in the battle of **Nelvēli**; destroyed the *Paravas* who did not seek refuge by approaching him; annihilated the race of the people of **Kuṟu-nāḍu** where crowds of beetles abounded on all sides; won a victory at the battle of **Śennilam** by driving into battle (a herd of) elephants of strong trunks; conquered many a time during the day, in the terrible battle-field of **Puliyūr** of strongly fortified walls, the **Kēraḷa** (king) whose matchless sway (extended) over the whole earth together with (his) near relations and their elephants and captured them alive[7]; marched against, attacked and destroyed unopposed the sea of weapons, and the high mountains (of that country); performed many times on earth (the gifts called) *hiraṇya-garbha* and *tulābhāra*, and gave (the same) with pleasure to Brāhmans and the infirm inviting them to come and assemble.

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[1] In blessing it, they actually suggested that the king might grant the village to the Brahman Naṟkoṟṟaṉ under the name Vēḷvikuḍi.

[2] Mr. K. V. Lakshmana Rao, M.A., has suggested in an article entitled 'The Kopparam Plates of Pulakēśin II, contributed to the *Annals of the Bhandarkar Institute*, Vol. IV, Part I, pp. 48 to 54, that *Kali-kula* occurring therein text-*l*. 8 is possibly a reference to the *Kaḷabhras*. He seems to be right; for the phrase *Kaḷabhran=eṉṉum=Kali-araiśaṉ* in *l*. 40 of the Vēḷvikuḍi Plates properly translated means 'a Kali king named Kaḷabhra.'

[3] *Tiṟaviḍin* is interpreted by Pandit R. Raghava Aiyengar of Ramnad to mean 'by his strength.'

[4] As usual this 'spot' of the earth is her being in possession of kings other than himself.

[5] Dr Winslow gives under *vaḻi*, the phrase *vaḻittoṉṟal* in the sense of 'a son.'

[6] Dr Krishṇaswami Aiyyangar holds the view that Vil-vēli means 'a hedge of bows,' but here it must refer to a name.

[7] The word *-iṟavāmai* is explained by Pandit Raghava Aiyangar of Ramnad to mean 'in a moment.'

(L. 62). Then (came) his son King **Śaḍaiyaṉ**, the **lord of Koṅgas**, whose javelins were long, brilliant and destructive, who was (also called) **Teṉṉaṉ Vāṉavaṉ**, **Śembiyaṉ**, **Śōḻaṉ**,[1] king of kings, the beautiful **Karunāṭakaṉ**, who with the victorious javelin in his right (hand), fought and destroyed the glory of the ocean-like army that came forth at **Marudūr** and capturing **Āyavēḷ**, attacked and destroyed him completely[2], gained victories in battles at **Śeṅgoḍi** and **Pudāṉkōḍu**[3] and brought his (*i.e.*, Āyavēḷ's) anger to an end ; at the great city called **Maṅgalapura**, where the peacock danced with the cuckoo near tanks perfumed with opening flowers, attacked and destroyed the **Mahārathas** ; removed the word "common property"[4] (with reference to) the country (bordering) on the roaring sea ; administered justice tempered with mercy and ruled the earth with love, having reached the slopes of the high and permanent mountain (Mēru) and cut on the broad face of it the **bow**, the **tiger** and the **fish**.

(L. 71). Then (came) his son **Tēr-Māṟaṉ** (*i.e.*, Māṟaṉ of the horse-chariot) the king of kings, a member of the Pāṇḍya (Teṉṉavar) family, the proud possessor of the white parasol, who in order to acquire the goddess of the earth, carried in his right hand the awe-inspiring javelin and driving (forth) *mast* elephants (into the battlefield), defeated straightway at **Neḍuvayal** his opponents, who had rushed in great haste (*against him*) ; suppressed the rage of those whose minds were filled with anger (*against him*), at **Kuṟumaḍai** ; destroyed the power of (the enemies) who confronted him at **Maṇṇikuṟichchi** and **Tirumaṅgai** ; saw the backs of the insubordinate (*chiefs*) who advanced towards him with an ocean-like army, at **Pūvalūr** ; captured the fiery steeds, the black elephants and the sharp missiles of enemies at **Koḍumbāḷūr** which had high ramparts and deep trenches (round it) ; deprived the splendour of the **Pallava** (*king*) . . . . at **Kuḻumbūr** and took numberless huge elephants and horses ; humbled at **Periyalūr** the greatness of those who had come to cut him asunder not bearing (to see his greatness) ; crossed the **Kāviri** (*with its*) groves (of trees) and tanks of budding flowers ; subjugated **Maḻa-Koṅgam** with (the help of his) beautiful long bow ; proceeded and reached **Pāṇḍikkoḍumiḍi** of high fortifications, beautiful with the lustre emanating from brilliant gems ; prostrated at and worshipped the lotus feet of Paśupati (*Śiva*) ; gave away with great pleasure heaps of gold and lustrous gems; contracted relationship with **Gaṅgarāja**, who wore garlands of sweet-scented flowers ; and performing on earth countless (gifts of) *Gōsahasra*, *hiraṇyagarbha* and *tulābhāra*, relieved the distress of (the Brāhmaṇas) who studied the Vēdas ; renewed the palaces and the high ramparts (of the capital towns)[5] named **Kūḍal** (*i.e.*, Madura), **Vañji** (Karūr) and **Kōḻi** (Uṟaiyūr) and ruled the whole earth (bounded) by the roaring ocean.

(L. 88). Then (came) his son **Neḍuñjaḍaiyaṉ**, the king of the **Nēriyar** (*i.e.*, the Chōḷas), who (wore) a high crown covered with flowers and gems, who kept (*his*) council secret, who was respected for his virtues (and possessed) an army of battalions (*as extensive*) as the rising noisy ocean, who was afraid of (committing) sins, who had no wants, who was the lover of the learned (**Paṇḍitavatsala**), death to his enemies (**Parāntaka**), a Pārtha (*i.e.*, Arjuna) in (wielding) the bow, clever in his designs, cruel to the wicked, the enemy of the Kali (*age*) (**Kalippagai**), the performer of noble deeds, the abode of mercy, a Kinnara in music, firm as mountain, the smasher of heroes, he who equalled Manu, whose commands were obeyed, who was strong as

[1] The king having conquered the Chēra and the Chōḷa, apparently appropriated their crests also, *viz.*, the bow and the tiger and their titles *Vāṉavaṉ*, *Śembiyaṉ* and *Śōḻaṉ*.

[2] The word *ēyeṉṉāmai* is translated tentatively.

[3] *Śeṅ-goḍi* and *pudāṉ-koṭṭu* may have to be interpreted in the sense of 'brilliant flag' and 'brand new drum.' (?), which perhaps were the boast of the Āyavēḷ.

[4] *I.e.* made it all his own.

[5] We must understand after *eṉṉum*, some word like *nagaraṅgaḷin*. But it is also possible that *māḍa-māmadiḷ* is a recognised term (*rūḍha-nāma*) for a capital town with palaces and fortifications; *cf.* the term as it occurs in *l.* 104.

wind, the foremost of the valiant, master of heroism, renowned for good behaviour, free from (*all*) blemish, **Punappūḻiyaṉ**, **Śiṉachchōḻaṉ**, **Śrivara**, the paramour of Śrī (*i.e.*, Lakshmī), the **Teṉṉaṉ** (*i.e.*, Pāṇḍya) and **Vāṉavaṉ** (*i.e.*, Chēra)[1] whose long hand holds the bow and whose one word (of command) was accepted by the earth (*bounded by*) the noisy sea, who appeared in the form of Vishṇu with victory thrice-told[2], protecting the earth under his cool white umbrella, well praised by the goddess of the flower (*i.e.*, Lakshmī), the goddess of the earth and the goddess of the tongue (*i.e.*, Sarasvatī); who began his rule so brilliantly that the strength of the lord of Kali was weakened; who, in the battle of **Peṉṉāgaḍam** (*surrounded by*) an expanse of water and flowery groves and (*situated*) on the southern bank of the **Kāvērī** of blooming flowers and well-watered paddy fields, defeated the **Kāḍava** (*king*), who inconsiderately came and attacked (*him*) with his four-fold big army spread on all sides of the extensive earth girt by the black ocean, and drove (*him*) into the forest; and who crushing and driving in a fierce battle the **Āya-Vēḷ** and the **Kurumbas** that came and attacked (*him*) in great numbers, advanced with fiery spears and gained a victory over them in a battle at **Nāṭṭukkuṟumbu** (*i.e.*, Kuṟumbu-nāḍu) (*so that they*) sought shelter in forests for (*their*) fortifications.

(L. 103). **While the third year of the reign of this (king) was current,** one (*particular*) day a bystander of **Kūḍal** (*i.e.*, Madura) (*the city of*) mansions and high ramparts, having cried out (*by way of complaint*)[3], the king himself at once called him mildly and was pleased to ask him first "what is your complaint." The bystander submitted thus "Oh! Mighty king of powerful army! Formerly without swerving from the pure (*path*) prescribed by law, (the village) called **Vēḷvikuḍi** included in **Pāgaṉūr-kūṟṟam,** whose flowery groves touched the sky, was designated Vēḷvikuḍi and was granted through the *kēḷvi* (Brahmans) by your ancestor, the great lord known as **Palyāgamudukuḍumi-Peruvaḻudi,** who protected (the earth) girt by the ocean with an army of spearsmen who never miss (*their aim*). It has (*since*) been resumed by the ignoble (*yet*) ocean-like army of the **Kaḷabhras.**" The king gently smiled and said: "Very well, very well, prove your antiquity (*of the gift*) by (*a reference to*) the district (*assembly*) and receive (*it back*)." He (the supplicant) proved then and there, the antiquity of his (*claim*) by (*a reference to*) the district (*assembly*). Thereupon the powerful king, of long arms holding the bow, being overjoyed was pleased to declare "what was granted formerly by my ancestors according to rule, is also granted by Us," and so saying he, of (*many*) chariots and ocean-like army, gave (*it*) with libations of water to **Kāmakkāṇi Naṟchiṅgaṉ,** the headman of **Koṟkai.**

(L. 118). The four big boundaries of this (*village*) given in full detail are:—(*The eastern boundry is*) to the west of the boundary of **Nagarūr** surrounded on (*all*) sides by faultless flower-gardens. The southern boundary of this (*is*) to the north of the field (*called*) **Kūḷvandai-śey** of **Kuḷandēvaṉ** and of the banyan tree in the **Kaḷandai**-pond. The western boundary of this (*is*) to the east of the mound (*peruppu*) on the western side of the field (*called*) **Oḍumaiyiruppai-śey** of the faultless **Koṟṟaṉputtūr.** And the northern boundary of this (*is*) to the south of the mound on the northern side of (*the village of*) **Pāyal** where lotuses grow in canals.

(L. 124). The land included within the four big boundaries thus described is also given away by us, inclusive of *kārāṇmai* and *mīyāṭchi,* in the same manner as it had been given formerly by our ancestors.

(L. 126). The *āṇatti* of this (grant) correctly described is **Mādavikalaṉ, Māraṅgāri,** the crest-jewel of the **Vaidyaka** family entitled **Mūvēndamaṅgalappērāraiyaṉ** who was favoured by the king of kings, whose army fought powerfully like a thunderbolt, in battles where

[1] See foot-note 1 on p. 807, above.

[2] கொற்ற முற்றன் றுடனியம்ப could not be satisfactorily interpreted.

[3] I have taken *ākrōdhikka* to stand for *ākrōśikka* from root *kruś* with the prefix *ā*; see *Naishadhakāvya*, h. I, v. 81, where *ā-kruśyata* is explained 'cried out in order to expose a mistake committed.'

machines shaped like wild hogs (*ēnappori*) killed (*the enemies*) in (*close*) fight with (*drawn*) swords when the kings of the east (**Pūrvarājar**) possessing clamorous battalions of fighting men rose up, and put to flight with (*great*) loss in an infantry attack at **Veṇbai**, the **Vallabha** of a vast army of archers, on the occasion when the excellent daughter of **Gaṅgarāja** who wore a garland of highly scented flowers (*dribbling*) honey was secured and offered to **Koṅgarkōṉ** (*i.e.*, the Pāṇḍya king)[1], who was a prince of the race of **Karavandapurattavar**, who possessed a powerful and big army that crushed the pride of those who came to fight being (*thither*) brought together by (*i.e.*, under the leadership of) kings wearing many bracelets and possessing an army of spearsmen who wielded deadly weapons.

(L. 134). **Kāmakkāṇi Śuvaraṉ Śiṅgaṉ**, the headman of Korkai, who owns this *brahmadēya* reserving for himself one-third of this (*village*), gave the (*remaining*) two parts to fifty Brāhmaṇas with libations of water. In this are included the four and a half *paḍāgāras* (*of land*) of **Mūrti Eyiṉaṉ** approved by the (*village*) assembly. And in the part reserved for himself in this (*village*) he gave with the approval of the (*village*) assembly four *paḍāgāras* to his younger brothers and six *paḍāgāras* to his younger paternal uncle's children. And the owners of the three parts with their united approval gave four *paḍāgāras* (of land) to the general (**Senāpati**) **Ēnādi** *alias* **Śāttaṉ Śāttaṉ**, who composed[2] this eulogy (*praśasti*).

(V. 18). The *ājñapti* of this (document) was **Maṅgalarāja**, the very sweet (*madhuratara*) poet (*kavi*) and orator, well versed in the sciences, a **Vaidya** and a resident of **Karavandapura**.

(V. 19). Oh! Dharma! A (*learned*) man must render protection to the deeds of others. Indeed (*these are*) the feet acquired by (*i.e.*, on which stands) great fame. The world was all created by Dhātṛi (Brahman). Still kings desirous of merit protect the earth.

(V. 20). No gift is greater than the gift of land; nor is there a greater sin enjoined (*on man*) than (*that of*) resuming land (*already given*).

(V. 21). Oh! Gladdener of your race! He that makes a gift on this earth blesses (*his*) ten generations past and future; and he that takes away (*that which has been given*) destroys ten generations past and future.

(V. 22). To him that robs land given by himself or by others, there is no expiation anywhere except in the dreadful hell.

(V. 23). Lands have been given away by many. Different kings are ruling (*them*). The fruit (*of protection*) belongs to him whose land it happens to be (*at the time*). These four are verses in the **Vaishṇava-Dharma**.

(L. 151). "The flower-like feet of those who protect this (*charity*) shall be on my crown." The king himself was thus pleased to say and caused a copper-plate grant to be executed at once.

(L. 152.). **Śuttakēsari-pPerumbāṇaikkāraṉ** who engraved this (*document*), and to whom were allotted through the favour of the great men (*of the village*) one house site, two *mā* of (*wet*) field and one[3] dry field received (*the above*). This is the signature of **Yuddhakēsari-Perumbāṇaikka[ra]ṉ**.

[1] See above, p. 307. If we took Koṅgarkōṉ as referring to the king of the Koṅgas, the reason for Māraṅgāri taking part with the Koṅgu king will have to be explained. So far as we know, the Koṅgu king was an enemy of the Pāṇḍya and was on several occasions defeated by him.

[2] The word *pāḍina* clearly indicates that the composition was in verse.

[3] Perhaps one *mā*.

No. 17—THE NALANDA COPPER-PLATE OF DEVAPALADEVA.

BY HIRANANDA SHASTRI, M.A., M.O.L., OOTACAMUND.

This copper-plate was unearthed by me at **Nālandā** during the course of my archæological explorations of the well-known Buddhist site there in 1921. As I have already stated in my annual progress report for the year 1920-1921, where[1] I have given a tentative account of the document, the plate was found in the antechamber of the so-called monastery *B* which has yielded many interesting antiques testifying to its past glory. The debris round it and its encrustation showed that the plate must have suffered from the conflagration that destroyed the building in whose remains it lay buried for so many centuries. Fortunately, it has escaped destruction, and excepting a slight injury here and there, the whole of the record together with its seal is practically intact. It has been very carefully treated by the Archæological Chemist and has now become fairly readable.

The plate bears forty-two lines on the obverse and twenty-four on the reverse, each measuring about 1′ 4″ long, excepting the last line on the second side which is only 4″ in length. The inscription is written in early **Dēvanāgarī** script and its language is **Sanskrit**. The formal part of the grant which it registers is in prose and the rest is in verse, excepting the words *ōṁ svasti* and *tathā cha dharmānuśansanaślōkāḥ*, written at the commencement of the first and the second side respectively. The **seal**, which the accompanying fac-simile illustrates, is soldered to the plate and bears the legend **Śrī-Dēvapāladēvasya** meaning "of the illustrious **Dēvapāladēva**", written below the emblem of the *dharmachakra* placed between two gazelles as in the seals of other **Pāla** kings. The wheel or *dharmachakra* symbolizes Gautama Buddha's unfolding the Law and the diffusion of knowledge to the world that was groping in darkness and the deer refer to the Mṛigadāva forest which is now represented by Sārnāth near Benares where the 'Great Sage' turned 'the wheel' for the first time while delivering the great sermon to the five monks or '*Pañchavaggīyas*'. That the Pālas adopted this symbol is but natural for we know that they were staunch Buddhists and patronised learning.

The introductory portion of the inscription, consisting of the first twenty-five lines, is identical with the similar portion of the Mungīr (Monghyr) copper-plate grant of the same king that has been edited by the late Professor Kielhorn.[2] It enables us to remove the few doubts the said scholar had in his reading of the record. As is shown by the dates given in the two documents, the Nālandā grant is posterior to the other by some six years though both were issued from the same place, *viz.*, *Śrī-Mudgagiri-samāvāsi-śrīmaj-jayaskandhāvāra* or the victorious camp at **Mudgagiri**, the modern Monghyr in Bihār.

The inscription was written and engraved with considerable care; still a few inaccuracies are to be noticed in it. These have been pointed out in the footnotes added to the text below. As regards orthography, it resembles very much the other grant from Monghyr and there is, perhaps, little to be added to the remarks which Kielhorn made about it while editing the latter document. As to his statement[3] that "the only passages about which I am at all doubtful, and in which the rediscovery of the plate may prove me to have gone wrong are the words *suvinayināṁ* in line 5; *rājakulīya-samasta* in line 40 and *karahiraṇya* in line 45",—on the authority of this epigraph, I may say that his reading *suvinayināṁ* should be treated as wrong though the translation is right. This plate gives *sati kṛitināṁ* which must have been

[1] *A. R. Central Circle*, 1920-1921, pp. 37 ff.

[2] *Ind. Ant.*, Vol. XXI, pp. 253-258.

[3] *Ibid*, p. 253.

the reading in the other document also, the sense being that as this king furnishes a living example people have to believe in the historical reality of the rulers like Pṛithu, Sagara, etc. The remaining two words, as is shown by this plate where they occur in line 35 and line 42, respectively, were correctly read by him.

The charter was issued by the devout worshipper of **Sugata** or Buddha, the *Paramēśvara-Paramabhaṭṭāraka* and *Mahārājādhirāja*, the illustrious **Dēvapāladēva**, the son and successor of **Dharmapāla**, who is regarded to have been the most powerful of the Pāla kings of Bengal. As I have just stated, its introductory portion is identical with that of the other grant and gives the genealogy of the donor which has already been discussed by scholars. The formal part of the grant, which the inscription registers, is worth considering. The wording is the same as we find in the other document. The officials mentioned are also similar, including the "*Pramātṛi*" and the "*Śarabhaṅga*", excepting the "*Prāntapāla*" who is left out, though the order in which they are named is different. Amongst the names of the countries mentioned in line 35 of the Mungīr (Monghyr) plate, this inscription puts *Ōḍra* in place of *Gauḍa* and omits *Lāṭa* altogether. Herein we are told that Dēvapāladēva at the request of the illustrious **Bālaputradēva the ruler of Suvarṇṇadvīpa,** made through an ambassador, granted five villages, four of which lay in the **Rajagṛiha** (Rājgir) and one in the **Gayā** *vishaya* (district) of the **Śrī-Nagarabhukti** (Patna Division) for the increase of merit and fame of his parents and himself for the sake of income toward the blessed Lord Buddha, for various comforts of the revered *bhikshus* of the four quarters and for writing the *dharma-ratnas* or Buddhist texts (i.e. for the three jewels) and for the upkeep of the monastery built at *Nālandā* at the instance of the said king of *Suvarṇṇadvīpa*. The endowment, being entirely **Buddhist**, forms a distinctive feature of the grant and amply justifies the epithet of *parama-Saugata* applied to the donor. The four villages granted in the Rājagṛiha *vishaya* were **Nandivanāka, Maṇivāṭaka, Naṭikā** and **Hastigrāma** and the one in the Gayā *vishaya* was called **Pālāmaka**. As is usually the case in such grants, this part of the document ends with the date of the endowment which is the **21st day of Kārtika of the** (regnal) **year 39** and is written after the orders of the royal donor demanding regular payment of all the revenues due for the purposes noted above.

The second side of the plate first gives the well-known imprecatory and benedictory verses and, thereafter, introduces **Balavarmman** who acted as the dūtaka in this 'meritorious undertaking' and whom it describes as the **'overlord of Vyāghrataṭī-maṇḍala,** ever ready to fight his foes independently.' Evidently he was the official of the King of Magadha entrusted with all arrangements to be made in connection with the grant. Then the inscription supplies, though unfortunately too meagre, an account of Bālaputradēva, the king of Suvarṇṇadvīpa at whose instance the endowment was made giving, also, some information regarding his ancestry. It is mainly in this connection that this document is specially interesting and possesses considerable international value. We learn that the dynasty to which **Bālaputra** belonged was that of the **Śailēndras,** who were Buddhists and held the island of **Java** under their sway about the eighth century of the Christian era or the Śaka year 700. The latter fact about the Śailēndras is already known from the **Kalāsan** inscription which has been published by Dr. (now Sir) R. G. Bhandarkar[1] and Dr. J. L. A. Brandes[2]. But this Nālandā copper-plate introduces to history for the first time **Śrī-Bālaputradēva,** the **Śailēndra King of Suvarṇṇadvīpa** together with some of his relations, as well as the *dūtaka* (of the grant), namely, **Balavarmman.**

The illustrious Mahārāja **Bālaputradēva,** our inscription tells us, was the **overlord of Suvarṇṇadvīpa.** His mother was **Tārā,** the daughter of a King **Dharmasētu** of the lunar race and

[1] *Journal of the Bombay Branch of the Royal Asiatic Society,* Vol. XVII, Part II, for 1887, Art. I.
[2] The *Tijdscrift voor de Taal,-Landen-Volkenkunde van Nederlandsch Indië,* XXXI (1886), p. 240 sq.

the queen consort of the mighty king who was the son of the renowned ruler of "**Yavabhūmi**." The latter, we are told, was the ornament of the **Śailēndra** dynasty and 'his name was conformable to the illustrious crusher or tormentor of his brave enemies'. Though the epigraph gives high praises for all these rulers, yet it contains no other information regarding their identity. The name of the father of Bālaputradēva is not given at all but the name of the grandfather is said to have been something like '*Śrī-vīra-vairi-mathana*', meaning 'the illustrious destroyer of heroic foes'. This would lead us to surmise that the name must have been one like Paramarddi-dēva, Śatruñjaya, Arimarddana, Arindama, etc., but what it really was I am not in a position to find out. The **Yavabhūmi** and the **Suvarṇṇadvīpa** are evidently identical with the **Yavadvīpa** and the **Suvarṇṇadvīpa** islands spoken of in Sanskrit works like the *Rāmāyaṇa*[1] or the *Kathāsaritsāgara*[2] and are unquestionably the modern Java and Sumatra. While speaking of Bālaputradēva as the king of Suvarṇṇadvīpa and his grandfather as the ruler of Yavabhūmi, the author of our inscription, apparently, took both the islands as one considering them practically united. As M. Duroiselle kindly tells me, the consensus of opinion, arrived at by scholars like Barth and Kern, is that Suvarṇṇadvīpa and Yavadvīpa are the same, that is Java-Sumatra. The document goes to confirm the view that Yavadvīpa is Java proper and that Suvarṇṇadvīpa is properly Sumatra. This **Suvarṇṇadvīpa**, however, is different from the **Suvarṇṇabhūmi**, which, as M. Duroiselle has kindly informed me, in its most extended sense refers to Indo-China, but, particularly, to the country extending beyond the eastern and northern coasts of the Bay of Bengal or Rāmaññadēśa (*i.e.*, lower Burma).

Now the question which would present itself for solution is, who were the Śailēndras mentioned in the plate? There are only two Javanese inscriptions in Nāgarī, known to me, which were issued by a king of the Śailēndra dynasty. One of them, to which I have alluded above, commemorates the foundation of a temple of Tārā, the well-known Goddess of the Mahāyāna pantheon, the setting up of her image, and the building of a monastery in the year 700 of the Śaka era during the prosperous reign of a king of this dynasty[3] whose name to our regret is not forthcoming. The other[4] inscription is not yet published and the following information regarding it I owe to the courtesy of Dr. Bosch, Director of Archæology in Netherlands-India. It comes from Klurak, a site between the Prambanam and Sewu-temples in Central Java and belongs to the Śaka year 704, the object being to commemorate the erection of an image of Mañjuśrī, another noted divinity of the Mahāyāna pantheon. In one of the lines of this inscription Dr. Bosch reads: *rājñā dhṛitā dhṛitimatā dharaṇīndranāmnā* and finds the king's name to be Indra, though one could take it to be Dharaṇīndra (earthly Indra) as well. Yet another inscription I know of, which is connected with this evasive race of the Śailēndras, comes not from Java but from India and, like our Nālandā inscription, records the erection of a monastery and an endowment for it. It is engraved on twenty-one copper-plates now preserved in the Leyden Museum in Holland and belongs to the reign of the Chōḷa King Rājarāja-Rājakēsarivarmman (985-1013 A. D.). This highly interesting document tells us that the illustrious king **Māravijayōttuṅgavarmman of the Śailēndra dynasty and the lord of Śrīvijaya**[5] caused to

[1] Canto IV, Chap. XL., St. 30, and the *Tilaka* commentary on these verses. Here we find that Java in remote antiquity formed a large principality which comprised not less than seven minor states.

[2] *Taraṅga*, 57; *Sts.* 96, 134, 173, etc.

[3] राज्ये प्रवर्धमाने राज्ञः शैलेन्द्रवंशतिलकस्य. Dr. Bhandarkar read in the sixth line of this inscription *Śailēndra-varmmatanujasya* and thought that *Śailēndravarman* was the proper name of the father of the donor whose name he took to be Paṇaṁkaraṇa. The correct reading, however, as the late Dr. J. L. A. Brandes has shown, must be *Śailēndravaṁśatilakasya*.

[4] Except these two inscriptions there exists a number of fragments of inscribed slabs, which according to Dr. Bosch, might be attributed to the Śailēndra race but they are all too weather-worn to be deciphered.

[5] Dr. Hultzsch takes *Śirī-Viśaiya* of Tamil inscriptions as the equivalent of Śrī-Vishaya (above, Vol. IX, p. 231).

be built a lofty and very beautiful monastery at **Nāgapattana**, the present port of Negapatam[1] and that it was endowed by the Chōḷa king Rājarāja, thus furnishing an exact parallel to the Nālandā monastery of our plate.[2] This **Śrīvijaya** is the same as the **San-fo-tsai** of the Chinese Annals and, according to M. George Coedes, must be identified with the kingdom of **Śrīvijaya or Palembang**, which is a residency of Sumatra.[3] The Leyden grant says that Māravijayōttuṅgavarmman was the overlord (*adhipati*) of Śrīvijaya who, while extending the kingdom of Kaṭāha, caused that monastery to be built in the name of his father. Thus on the authority of this invaluable record it becomes clear that, about the end of the 10th century A. D., Sumatra was governed by the Śailēndra dynasty to which king Māravijayōttuṅgavarmman or his father Chūḍāmaṇivarmman belonged. That both **Sumatra and Java were under the sway of the Śailēndras about the ninth century** we glean from the Nālandā copper-plate inscription. That they were governed by the same dynasty in the seventh century of the Christian era we learn from the two inscriptions to which I have referred above. In one of the inscriptions[4] engraved on the south wall of the well-known temple at Tanjore we find that Rājēndra-Chōḷa caught a **king of Kaḍāram**, named **Saṅgrāmavijayōttuṅgavarmman**, and took his vehicles as well as accumulated treasure. This king of Kaḍāram in the light of the Leyden grant was, probably, the **successor of Māravijayōttuṅgavarmman**, the **Śailēndra king of Śrīvijaya** spoken of in it. If the Tanjore inscription is to be trusted—I do not think there is any reason why it should not be—we can say that Rājēndra-Chōḷa, while capturing the king, succeeded in conquering the kingdom of Śrīvijaya or Palembang. The Leyden plates tell us that he confirmed the grant made by his father Rājarāja for the monastery built by the Śailēndra king Māravijayōttuṅgavarmman or the predecessor of the very ruler whom he caught and dispossessed of heaps of treasures. This would lead us to surmise that Saṅgrāmavijayōttuṅgavarmman proved refractory and the Chōḷa King had to take the extreme step to bring him round. Here it may be remarked that in the documents, known at present, these Śailēndras or the rulers of Śrīvijaya are no where mentioned as the feudatories of the Chōḷas or other Indian kings. Building convents or *vihāras* in one's territory does not necessarily indicate tutelage[5] though it does show friendship or mutual regard. That the Śailēndras founded monasteries in India at Nālandā or elsewhere certainly signifies their being fervent Buddhists. These *vihāras*, like the one founded at Bodh Gayā by Mēghavarṇa of Ceylon during the Gupta epoch, gave shelter to their own people as well as others. **Dēvapāladēva was a staunch Buddhist.** He endowed the monastery, which Bālaputradēva, the Javanese King, founded at Nālandā, at the latter's express request, communicated to him through a *dūtaka* or ambassador. But this fact alone cannot imply that the ruler of Java was a vassal of the King of Magadha. Though the capture of the King of Kaḍāram by Rājēndra-Chōḷa in later days indicates submission no doubt, yet I think, to show that the Śailēndras were really the feudatories of the Chōḷas, proof is still wanting. Under the existing circumstances what we can safely assume is that the relations of these Kings were rather based on trade and traffic and were of a peaceful nature.

[1] It was probably this structure, which, as the late Mr. Smith has said in his *Early History of India*, 3rd ed., p. 466, survived in a ruinous condition until 1867, when the remains of it were pulled down by the Jesuit fathers and utilised for the construction of Christian buildings.

[2] The splendid convent built by King Mēghavarṇa of Ceylon at Bodh-Gayā near the holy *Bōdhidruma* about the year A. D. 360 with the permission of Samudragupta, the Great, affords another instance of this kind. For a brief account of it see Smith's *Ancient History of India*, 3rd ed., p. 287.

[3] Encyclopædia Britannica, XI ed., Vol. XXVI, p. 73. For mention of Śrīvijaya in an old Malaya inscription probably of the 7th Century A. D., lately found in Palembang, see Ph. S. Van Ronkeb's notice in the *Acta Orientalia*, Vol. II, Part I, p. 21.

[4] *South-Indian Inscriptions*, Vol. II, pp. 105 ff.

[5] The late Mr. Venkayya (*A. S. R.*, 1911-12, p. 175), apparently, assumed that the Śailēndras were feudatory to the Chōḷa Kings.

That close relationship must have existed between Coromandel and the Far East during the earlier centuries of the Christian era is pretty certain. The part played by Tāmralipti or Tāmlūk as an important port in those days for the sea-borne trade between India and the Archipelago will similarly associate Bengal with the Far East. These Śailēndras were staunch Buddhists to whom all the magnificent Buddhist buildings which we find in Central Java, like the one which probably contained the Tārā image mentioned in the Chaṇḍi-Kalāsan inscriptions spoken of above, owe their origin. Now, the question is whether they were emigrants from India or were indigenous people of Java-Sumatra, who embraced Buddhism in preference to Hinduism. The Yūpa inscriptions of King Mūlavarmman from Koetei or East Borneo or other early epigraphical records, which have been brought to light from Champa, Cambodia or Indo-China by eminent French or Dutch savants, would show that India has had a considerable share in the colonization of the Far East. The Yūpa inscriptions, as Dr. Vogel has already pointed out in his very learned brochure,[1] inform us that the erection of the sacrificial posts on which they are engraved was due to the twice-born priests or Brahmans, who had carried their ancient civilization and religion to Borneo, as well as, to Java and Sumatra and that on these priests King Mūlavarmman conferred rich grants of gold and land; a fact showing that as early as about 400 A. D. high caste Brahmans or *Vipras* migrated to the Far East and settled there. Fa-Hian found Brahmans settled in Ye-poti (Java or perhaps Sumatra). Sumatran civilization and culture seem to be of Hindu origin. Sumatra was probably the first of all the Archipelago to receive emigrants from India.[2] The names like **Coliya, Pandiya, Mēliyale**, by which some of the tribes that have settled in West Sumatra are known, and the fact that emigrants from India are designated by the term **Kēling** or **Kling**, which is clearly derived from **Kalinga**, would show that Southern India, including the Telugu country, had ample share in the colonization of the island or the Far East, as Dr. Vogel has already stated in his paper.[3] The matrimonial alliance mentioned in our Nālandā charter, which the father of Bālaputradēva had with a mighty king of the Lunar race, would, perhaps, lead us to trace the origin of the Śailēndras of Java-Sumatra to India. If a conjecture can be hazarded, these Śailēndras were emigrants from Kaliṅga or say Southern India. I am not aware if the term Śailēndra was ever applied to any of the dynasties which ruled in the south[4] or any other part of India. It will be going too far to connect it with the Śailavaṁśa[5] or the Śailōdbhavas[6] or other dynasties like the Śilāhāra having somewhat similar appellations. It may be pointed out, however, that the name of Malaiyamān, which is an exact Tamiḻ rendering of the Sanskrit word *Śailēndra*, meaning 'the lord of mountain or mountains', is to be met with in some of the inscriptions discovered in the South Arcot and Salem districts of the Madras Presidency where it is applied to some chieftains, who flourished about the 10th century A. D. Tamiḻ literature, however, knows of the Malaimāns, who might be attributed to the 7th and 8th centuries A. D. These chieftains were called Milāḍuḍaiyār or the rulers of Milāḍu, a contracted form of Malaiya-nāḍu or hill-country, and they claimed

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[1] *The Yūpa inscriptions of King Mūlavarman from Koetei* (East Borneo), p. 202.

[2] Encyclopædia Britannica, Vol. XXVI, p. 74. It may be incidentally pointed out that the statement made here in the Encyclopædia to the effect that Sumatra was called the first Java was caused by a wrong reading, as I learn from Prof. Krom through Dr. J. Ph. Vogel, and requires correction.

[3] *The Yūpa inscriptions*, etc., pp. 195-6.

[4] The late Mr. Venkayya (*A. S. R.*, 1911-12, p. 175) was inclined to connect them with some part of Orissa apparently on account of the similarity of names like Śailavaṁśa and Śailēndravaṁśa, pp. 42 ff. For Śailavaṁśa, see *Ep. Ind.*, Vol. IX, p. 283 and J. B. A. S., Vol. LXXIII (1904, p. 2 282 f.)

[5] *Ep. Ind.*, Vol. VI, p. 42.

[6] *Ibid*, Vol. XI, p. 282.

connection with the Chēdi family[1]. It is also noteworthy that sometimes their names end in *varmman*[2]. From the records noticed above we find that the names of the Śailēndras of Java-Sumatra or Śrīvijaya ended in *varmman*.[3] The name of the Śailēndra ruler given in the Nālandā plate on the other hand ends in *dēva*. This looks rather strange. The name Bālaputra itself, signifying 'young son' is curious. This ending of *dēva*, however, occurs only in the prose and formal portion but not in the other or metrical portion, which describes and eulogises these *Śailēndras*. This would go to suggest that the suffix was left out because the metre did not require it, or possibly because, it did not form an integral part of the name and would have been replaced by *varmman*, a general suffix or surname of the ruling caste or the Kshatriyas. The name, however, is pure Sanskrit as is the name of Tārā the mother of Bālaputradēva, or Dharmasētu, her father, and would point to emigration from India. Had the names of the two ancestors of Bālaputradēva, that is to say, his father and grandfather, been given, we could be definite in the matter, for, if these names were un-Indian, as in the case of Kuṇḍinga, his son Aśvavarman and grandson Mūlavarman of Borneo, we could conclude that the Sanskrit names must have been taken after conversion to Hinduism, or rather Buddhism. But in none of the names of the Śailēndras do we find any foreign sound at all, suggesting that they were the natives of the islands originally and came into the fold of Buddhism afterwards.

The names of the Pāla kings and other personages mentioned in the introductory portion of this grant have been dealt with by Kielhorn or other scholars in connection with the contents of the Mungīr copper-plate inscription. So I need not notice them here. But, besides them and the Śailēndras, our record speaks of two more persons and they require special mention. One of them is **Dharmasētu** whom the inscription describes as a scion of the **Lunar** race and the father of Bālaputradēva's mother, namely, Tārā. To our regret it does not supply any other particular regarding him and it is hardly possible to identify him or to say

[1] Mr. K. V. Subrahmanya Ayyar, to whom I am indebted for this information, has kindly given me the following note on the Malaiyamāns :—

"Ancient Tamil works mention the names of a number of Malaiyamān chiefs, who might be attributed to the 7th and 8th centuries A. D. Some of these are :—(1) *Malaiyamān* Tirumuḍikkāri, (2) *Malaiyamān* Śōḻiya-Ēnādi Tirukaṇṇaṉ, (3) Malāḍar-Kōmāṉ Meypporuḷ-Nāyaṉār and Naraśiṅga-Munaiyaraiyar of Tirumuṉaippāḍi. Their capital was Tirukollur, the head-quarters of a *taluk* in the South Arcot district and a railway-station in the Kāṭpāḍi-Viḻuppuram section of the South Indian Railway. It is said to have been situated within the Chēdi country.

The Malaiyamān chiefs appear to have been rendering help to one or the other of the principal powers of the South, *viz.*, the Chēra, Chōḷa, Pāṇḍya and the Pallava. Naraśiṅgamunaiyaraiyar was a contemporary of the Śaiva saint Sundara-Mūrti-Nāyanār of the 8th century A. D.; he is counted as one of the canonised 63 Śaiva devotees of the Tamil country. In the account given of No. 3, in the Tamil hagiology, *Periyapurāṇam* figures a Tattan, whose name may be regarded as a variant of Datta. Besides, one of the poems of the Tamil anthology, *Pattuppāṭṭu* was composed in honour of a certain "Ārya King Piragadattan (Bhṛigu-Datta)". It may be noted that the Malaiyamān chiefs belonged to the Bhṛigu race as is evidenced by their inscriptions. Epigraphical reference to Narasiṁhamunaiyaraiyar is found in the Tanjore inscriptions of the Choḷa King Rājarāja I (A. D. 985-1013). In an early stone record of Rājakēsarivarman found at Tirunāgēśvaram near Kumbakonam, of about the 9th century A. D. mention is made of Milāḍuḍaiyar-paḷḷi.

It is interesting to note that the later members of the Malaiyamān family, who figure in numerous stone inscriptions, call themselves invariably Chēdiyarāyas (Chedirājas) and they are mostly subordinates of the Chōḷas of the 10th to the 13th centuries A. D. The appellation *Chēdiyarāyan*, assumed by almost all the chiefs, if it is not a mere accident, as it could not be, must indicate that they were the rulers of the Chēdi country. This fact taken with the names like Datta would make one infer a colonisation at some remote past of a branch of the line of Chēdi Kings, in the South Arcot district, where we find them."

[2] E. Hultzsch, *Ep. Ind.*, Vol. VII, pp. 185 and 145.

[3] Dr. Vogel in the aforesaid publication (page 194) remarks :—"Considering that among the dynasties of India proper there is a great variety of such royal surnames, as *āditya, gupta, chandra, dēvapāla, rāja, vardhana siṁha,* and *sēna*, the almost universal employment of names in *varmman* in the Far East is certainly very remarkable." The instance of our Bālaputradēva will furnish an exception.

whether he was an Indian king or some ruler in the Far East. The name whether it is read as Dharma or Varma-sētu appears to be new. The other interesting name occurring in the document is that of **Balavarmman** the ruler of Vyāghrataṭī-maṇḍala, who acted as *dūtaka* on behalf of the Magadhan king. As to why he was selected or what special connection he had with the ruler of such a remote island as Sumatra or Java, and whether he had been there or known personally to that king our inscription makes no mention. Apparently, there was no direct political relationship between the two; for, we know from the Khalimpur[1] plate of Dharmapāladēva that the **Vyāghrataṭīmaṇḍala** lay within the *bhukti* of Puṇḍravardhana, which was under the sway of the Pāla king Dharmapāla and, evidently, of Dēvapāladēva after him. Puṇḍravardhana is the same as Pauṇḍravardhana—Puṇḍra and Pauṇḍra being synonymous—which is the modern Rājshāhi district of Bengal[2]. The use of the word *adhipati* would indicate that in this instance at least the term *maṇḍala* connotes a larger area than *vishaya*, which in the majority of cases seems to include a *maṇḍala*[3]. During the reign of Dēvapāladēva, **Vyāghrataṭī** was governed by a distinct ruler called **Balavarmman**. The way in which he is praised in this epigraph, as the right arm of the Emperor, would show that he had a high rank even though he was one of the feudatories of Dēvapāladēva. As, however, our plate gives no genealogy or particulars about him his personality is very vague. A few homonymous[4] rulers are known to have flourished about that time but they appear to be quite different personages and even their dates will not agree with that of this plate. It looks curious that though the charter mentions the *dūtaka* of the King of Magadha yet it leaves the ambassador or ambassadors of the Javanese King unnamed altogether.

The vague manner in which the inscription describes the rulers of the Far East or Sumatra-Java and their relative king of the lunar race would show that its author did not know much of them. He knew of **Bālaputradēva** and his mother **Tārā**. The latter he compared to the goddess of that name. It is not improbable that the grant registered in the epigraph was made chiefly at her instance.

Our plate mentions several places calling for remarks. Out of these, I have already noticed three, namely, *Suvarṇṇadvīpa*, *Yavabhūmi*, and *Vyāghrataṭī*. Of the remaining ones **Nālandā** is the most important. The way, in which this record speaks of it, would show that it continued to be as important a centre of Buddhist lore as it was during the time of Hiuen Tsang's visit. The spelling of the name given in this document is **Nālandā** which is the correct way of writing it. The same spelling is given in a votive inscription on the image of

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[1] *Ep. Ind.*, Vol. IV, pp. 243 ff. *J. B. R. A. S.*, LXIII (1894), pp. 39 ff.

[2] Smith *Early History of India*, p. 373. As has already been stated by Cunningham (*A. S. R.*, Vol. XV, pp. 112 ff.) Kāntāra is another name of Puṇḍra or Pauṇḍra, *i.e.*, sugarcane, and the Mahākāntāra of the Allahabad inscription of Samudragupta, the Great, was probably an older name of this province which, about the middle of the fourth century of the Christian era, was governed by a King Vyāghra. Thus it does not appear to be improbable that the district of *Vyāghrataṭī* or the tiger's precipice—unless of course *vyāghra* is taken in the sense of castor oil in which case the word *Vyaghrataṭī* would be the slope marked or overgrown with castor plants,—was named after this tiger king.

[3] This would rather show that no mistake was made in the text of the Khalimpur grant and that Kielhorn's statement in the *Ep. Ind.*, Vol. IV, p. 253, footnote 3 that it was, will be obviated.

[4] For instance we know of a Balavarman, the lord of Prāgjyōtisha (Gauhati or Assam) from the Nowgong copper-plate (Dr. A. F. Hoernle, *J. B. A. S.* LXVI, pp. 285 ff.) and another of Kārūsha or rather Bṛihadgṛiha (Kielhorn; *Ind. Ant.* Vol. XX, pp 123 ff). On palæographic grounds the former of the two has been assigned to the last quarter of the 10th century or say nearly one century later than the date of Dēvapāladēva. The other is too little known to admit of identification. The third ruler of the name, who will synchronise with our document, was the father of Avantivarman II, who was the feudatory of Mahēndrapāla of Kanauj (cir. 890 A. D.). To think of identifying him with the Balavarmman of the Nālandā plate will be altogether unreasonable, for he was the ruler of Kathiawar, or Saurāshṭra and a feudatory of the formidable rival of the monarch of Bengal.

Saṃkarshaṇa which was dug out of the same site[1] and the newly discovered statue of Tārā. It again occurs not only in some Jaina writings but such an old work as the *Dīghanikāya*[2]. However, it seems to be noteworthy that none of these works called Nālandā a university but only a prosperous town though Hiuen Tsang describes it as if it were a University. The way in which it is described in our plate would show that it was really a centre of Buddhist learning.

As to the remaining place-names mentioned in this document, I think, **Śrīnagara** or **Śrīnagara-bhukti** must be identified with modern **Patna**, which as a district, includes Rājagṛiha (Rājgir) and, as a division or commissionership, comprises the district of Gayā, even now. It is true that in the Khalimpur grant of Dharmapāladēva, which has been referred to above, the name given for the city is Pāṭaliputra and not Śrīnagara or Nagara, still, I think, there were two designations, the one, *viz.*, Pāṭaliputra, which meant the whole town and the other, *viz.*, Śrīnagara, the main part of it, like the Bankipore of to-day. Nagara means the chief town generally, but in this case it meant *the* town, the prefix *Śrī* implying prosperity or wealth of the town. In other words Pāṭaliputra was the *pattana*[3] and the seat of Government, especially in earlier days during the supremacy of the Mauryas or the Imperial Guptas,[4] lay there, and Śrīnagara was its principal portion where the office of the *bhukti* or division was situated. One was concerned with the whole government but the other only with eight hundred[5] villages coming in its jurisdiction or *bhukti*. Thus Śrīnagara must have been a part of the whole which was termed Pāṭaliputra.[6] That, apparently, is the reason why the latter and not the former appellation of the town is to be met with in literature.

That **Rājagṛiha** and **Gayā** are respectively the **Rājgir** and **Gayā** of to-day requires no demonstration. The latter is a district still, though the former has now dwindled into a ruined town of the Bihār subdivision of Patna.

Regarding the villages which formed the object of the grant or endowment registered in the charter, we are told that Nandivanāka and Maṇivāṭaka were situated in the Ajapura-*naya* subdivision, Naṭikā in the Pilipiṅkā, and Hastigrāma in the Achalā-*naya* or subdivision of the Rājagṛiha *vishaya* or district, and that Pālāmaka was situated in the Kumudasūtra *vīthī*, a subdivision of the Gayā district. If similarity of sound can be depended on, I would propose the following identifications to which proximity of Nālandā will lend a great support. The Ajapura '*naya*' or subdivision of the inscription may possibly be represented by the **Ajaipur**[7] **village** in the Ajai Hisse Chahāram Mauzā in the Bihār Thānā and the two villages Nandivanāka and Maṇivāṭaka, granted in it, would be the **Nadiune** or **Naunvan** and **Manianwan** villages of these days, which are included in the Bihār Thānā. Pilipiṅkā I am inclined to identify with the **Pilkhi** or Pilkee Mauza and the Naṭikā village with the **Nai Pokhar** of to-day, both lying in the Silāō Thānā. Though I am unable to offer any identification for the ancient Achalā yet, I fancy, the village Hasti or Hastigrāma of the grant might be the Hethoa Bīghā village of the Bihār Thānā if not the Hathi Tolā of the Maner Police subdivision. The old village directory[8] of the Gayā district available to me does not, apparently, give any name

[1] See my *Annual Report of the Central Circle*, (Patna), for 1921, p. 5 and *J. B. B. O. R. S.*, Vol. X, pp. 30 ff.

[2] Vol. I. pp. 1 & 211-12.

[3] Cf. 'प्रधानभूतं नगरम्'; Bharata quoted in the *Śabdakalpadruma* under Nagara.

[4] Cf. पत्तनं यत्र राजधानी स्थिता and नगरमष्टशतग्राममध्ये तद्व्यवहारस्थानम् ; Yaśōdhara in his *Jayamaṅgalā* on the *Kāmasūtra* of Vātsyāyana (N. S. Edition), p. 44.

[5] Even in the Khalimpur grant the *Śrīmajjayaskandhāvāra*, or "royal camp or headquarters" lay at Pāṭaliputra. For the meaning of this expression cf. V. Smith's *Early History of India*, p. 398 and footnote 3.

[6] Similarly, I would identify the '*nagara-bhukti* of the legend on the seal, which, Dr. Spooner discovered during his explorations of the site (see his *A. P. R.* (*E. C.*) for 1916-17, p. 48) with the *Śrīnagara-bhukti* of this document.

[7] *Village Directory of the Presidency of Bengal*, Vol. XXVI (Patna District).

[8] *Village Directory of the Presidency of Bengal*, Vol. XXVII (Gaya District).

resembling the Kumudasūtra (or sūnu) or the Pālāmaka of our record and I refrain from offering a conjecture regarding their identity.

In connection with these place-names, it is interesting to note, that our document supplies one or two territorial terms, which appear to be new. The term *maṇḍala*, as I have remarked above, is here used, as in the grant of Amma II,[1] in the sense of *dēśa*, of which *vishaya* was a subdivision. The word '*vīthī*', which generally signifies a market, road-way or the like, appears to have been used, in this charter, in the sense of a division smaller than *vishaya*. Similarly the term '*naya*' seems to imply a like division. The use of these terms would show that *bhukti* was divided into *maṇḍalas* which were subdivided into *vishayas*, the latter being again portioned into *vīthīs* or *nayas*.[2] It is noteworthy that our document employs the term *naya* in the case of Rājagṛiha *vishaya* and *vīthī* in the case of Gayā *vishaya*. The former occurs regularly after (1) Ajapura, (2) Pilipiṇkā and (3) Achalā, which lay in the district or *vishaya* of Rājagṛiha, while the latter term is to be found in connection with the district or *vishaya* of Gayā only. This would indicate that in the two *vishayas*, which were so contiguous to each other, there were, probably, different subdivisions made, apparently, for revenue purposes, Rājagṛiha being subdivided into *nayas* and Gayā into *vīthīs*. Thus, we can say that the villages Nandivanāka and Maṇivāṭaka lay in the subdivision or *naya* of Ajapura, Naṭikā in the *naya* of Achalā, all these falling within the Rājagṛiha *vishaya*. The village of Pālāmaka, on the other hand, which belonged to the district or *vishaya* of Gayā, lay in the subdivision of Kumudasūtra, *i.e.*, Kumudasūtra-*vīthī*.[3]

TEXT.

Obverse.

Metres used : *Śārdūlavikrīḍitam* in vv. 1, 7, 8, 13, 14, 30, 31, 32, 33; *Praharshiṇī* in vv. 2, 26; *Vaṁśastha* in v. 3; *Upajāti* in v. 4; *Indravajrā* in v. 5; *Aupachchhandasikam* in v. 6; *Āryā* in vv. 9, 11, 22, 23; *Hariṇī* in v. 10; *Rathōddhatā* in vv. 12, 15; *Anushṭubh* in vv. 16, 17, 18, 19, 29; *Vasantatilakā* in vv. 20, 24, 25, 27, 28; *Pushpitāgrā* in v. 21; *Sragdharā* in v. 34.

1 [4]ओं स्वस्ति । सिद्धार्थस्य परार्थसुस्थित[5]मतेस्सन्मार्गम[भ्य]-

2 स्यत-

स्सिद्धिस्सिद्धिमनुत्तरां भगवतस्तस्य प्रजासु क्रिया-

3 त्[।*]

यस्त्रैधातुकसत्वसिद्धिपदवीरत्युग्रवीर्योदया-

ज्जित्वा

4 निर्वृतिमाससाद सुगतस्सर्वार्थभूमीश्वरः- [॥*१॥] सौभाग्यन्दध-

5 दतुलं श्रियस्सपत्न्या

गोपालः पतिरभवद्वसुन्धरायाः [।*]

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[1] *Ind. Ant.*, Vol. VII, p. 16; cf. Fleet, C.I.I., Vol. III, p. 32, footnote 7.

[2] It may be noted here that the term *vīthī* is also used in the sense of a division in the Ghughrahati plates of Samāchāradēva which have been edited by Mr. R. D. Banerji, in the August 1910 number of the *Journal of the Asiatic Society of Bengal*. Mr Bhaṭṭasāli, who is re-editing the grant for this journal, seems to take the word in its usual sense, but, in the light of this Nālandā document, his rendering cannot hold good.

[3] The reading can also be *sūnu*.

[4] Expressed by a symbol.

[5] Kielhorn has °स्थिर°.

6 हृ-
ष्टान्ते सति ज्ञातिनां गुणाग्नि यस्मिन् श्रेयाः पृथुसगरादयोप्यभूवन् [॥२*॥]
विजित्य येना जलधेर्व्वसुन्धरां विमोचिता

7 मोघपरिग्रहा इति ।
सवाष्पमुद्वाष्पविलोचनान्पुनर्वनेषु व(ब)न्धून्ददृशुर्म्मतङ्गजाः ॥[३॥*] चलत्स्व-
नन्तेषु व(ब)लेषु यस्य विश्वम्भरा-

8 या निचितं रजोभिः ॥[1]
पादप्रचारक्षममन्तरिक्षं विहङ्गमानां सुचिरं व(ब)भूव ॥[४॥*] शास्त्रार्थभाजा
चलतोनुशास्य वर्ण्णान्प्रतिष्ठापय-

9 ता स्वधर्म्मे[।*]
श्रीधर्मपालेन सुतेन सोभूत्स्वर्गस्थितानामनृणः पितॄणाम्[2] ॥[५॥*] अचलै-
रिव जङ्गमैर्यदीयैर्विचलद्भिर्द्विरदैः कदर्थ्यमाना ।

10 निरुपप्लवमम्ब(म्ब)रं प्रपेदे शरणं रेणुनिभेन भूतधात्री ॥[६॥*] केदारे
विधिनोपयुक्तपयसां गंगासमेते[3]म्बु(म्बु)धौ ।[4] गोकर्णादिषु चाप्यनुष्ठि-

11 तवतां तीर्थेषु धर्म्याः क्रियाः [।*]
भृत्यानां सुखमेव यस्य सकलानुद्धृत्य दुष्टानिमाल्लोकान्साधयतो[ऽ*]नुषङ्गजनिता
सिद्धिः परत्रा-

12 प्यभूत् ॥[७॥*]
[5]तैस्तैर्दिग्विजयावसानसमये संप्रेषितानां परैः सत्कारैरपनीय खेदमखिलं स्वां
स्वां गतानां भुवम् [।*] कृत्यं भावयतां

13 यदीयमुचितं प्रीत्या नृपाणामभूत्
सोत्कण्ठं हृदयं दिवच्युतवतां जातिस्मराणामिव ॥[८॥*] श्रीपरव(ब)लस्य
दुहितुः क्षितिपतिना रा-

14 ष्ट्रकूट[6]तिलकस्य ।
रण्णादेव्याः पाणिर्जगृहे गृहमेधिना तेन ॥[९॥*] धृततनुरियं लक्ष्मीः
साक्षात्क्षितिर्नु शरीरिणी ।[7] किमवनिपतेः कीर्त्तिर्मू-

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[1] Two strokes in place of one.

[2] Symbol for म् at the end of a *pāda* is peculiar.

[3] Kielhorn has समेता°.

[4] This *daṇḍa* could be left out.

[5] Kielhorn has तैर् तैर् which cannot be correct.

[6] The way of writing the letter ट is peculiar.

[7] This *daṇḍa* could be left out.

15 र्त्तीथवा गुह्यदेवता[।*]
इति विकल्पितो यश्चाप्स[रा*] वितर्कवतीः प्रजाः प्रकृतिगुणैरमियां यशांस्त-
गुणैरकारोदयः ॥[१०॥*] स्वाम्या प्र(प)तिव्रताभो सु-
16 तारत्नं समुद्रयतिरिव ।
श्रीदेवपालदेवम्प्रसन्नवक्त्रं सुतमसूत ॥[११॥*] निर्म्मलो मनसि वाचि
संयतः ।[1] कायकर्म्मणि(णि)च यः स्थितः शुचौ[।*]
17 राज्यमाप निरुपप्लवम्पितुर्वो(र्बो)धिसत्व इव सौगतं पदम् ॥[१२॥*]
भ्राम्यद्भिर्विजयक्रमेण ।[2] करिभिस्त्वामेव विन्ध्याटवीमुद्दामप्लवमानवा(बा)ष्पपय-
18 [सो] दृष्टाः पुनर्व(र्ब)[3] न्धवः[।*]
कम्बो(म्बो)जेषु च यस्य वाजियु[व*]भिर्ध्वस्तान्यराजौजसो हेषामिश्रितहारि-
हेषितरवाः कान्ताश्चिरम्वीक्षिताः[4] ॥[१३॥*] यः पूर्व्वं ब(ब)लि-
19 ना कृतः कृतयुगे येनागमद्भार्गव-
स्त्रेतायां प्रहृतः प्रियप्रणयिना कर्ण्णेन यो द्वापरे । विच्छिन्नः कलिना
शकद्विषि गते कालेन लोकान्त-
20 रम्
येन त्यागपथस्स एव हि पुनर्व्विस्पष्टमुन्मीलितः ॥[१४॥*] या गङ्गासम-
म्मिलितात्सपत्नमभ्यामासितु(तोः)[5] प्रथितदमास्यकेतुकीर्त्तेः[।*] उर्व्वीमा वप्प-
21 निवेतनाच्च सिन्धो-
रा लक्ष्मीकुलभवनाच्च यो बु(बु)भोज ॥[१५॥*]
स खलु भागीरथीपथप्रवर्त्तमाननानाविधनौवाटकसंपादितसेतुब(ब)न्धनिहित[शै]-
22 लशिखरश्रेणिविभ्रमात्[6] निरतिशयघनघनाघनघटा(टा)श्यामायमानवासरलक्ष्मी-
समारब्ध(ब्ध)संततजलदसमयसन्देहात्[7] उदीचीनानेक-
23 नरपतिप्राभृतीकृताप्रमेयहयवाहिनी-
खरखुरोत्खातधूलीधूसरितदिगन्तरालात् परमेश्वरसेवासमायातसमस्तजम्बू(बू)द्वी-
24 पभूपाल-
पादातभरनमदवनेः श्रीमुद्गगिरिसमावासितश्रीमज्जयस्कन्धावारात् परमसौगत-
परमेश्वरपरमभटा(ट्टा)रक-

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1 This *daṇḍa* could well be omitted.

2 This *daṇḍa* is unnecessary.

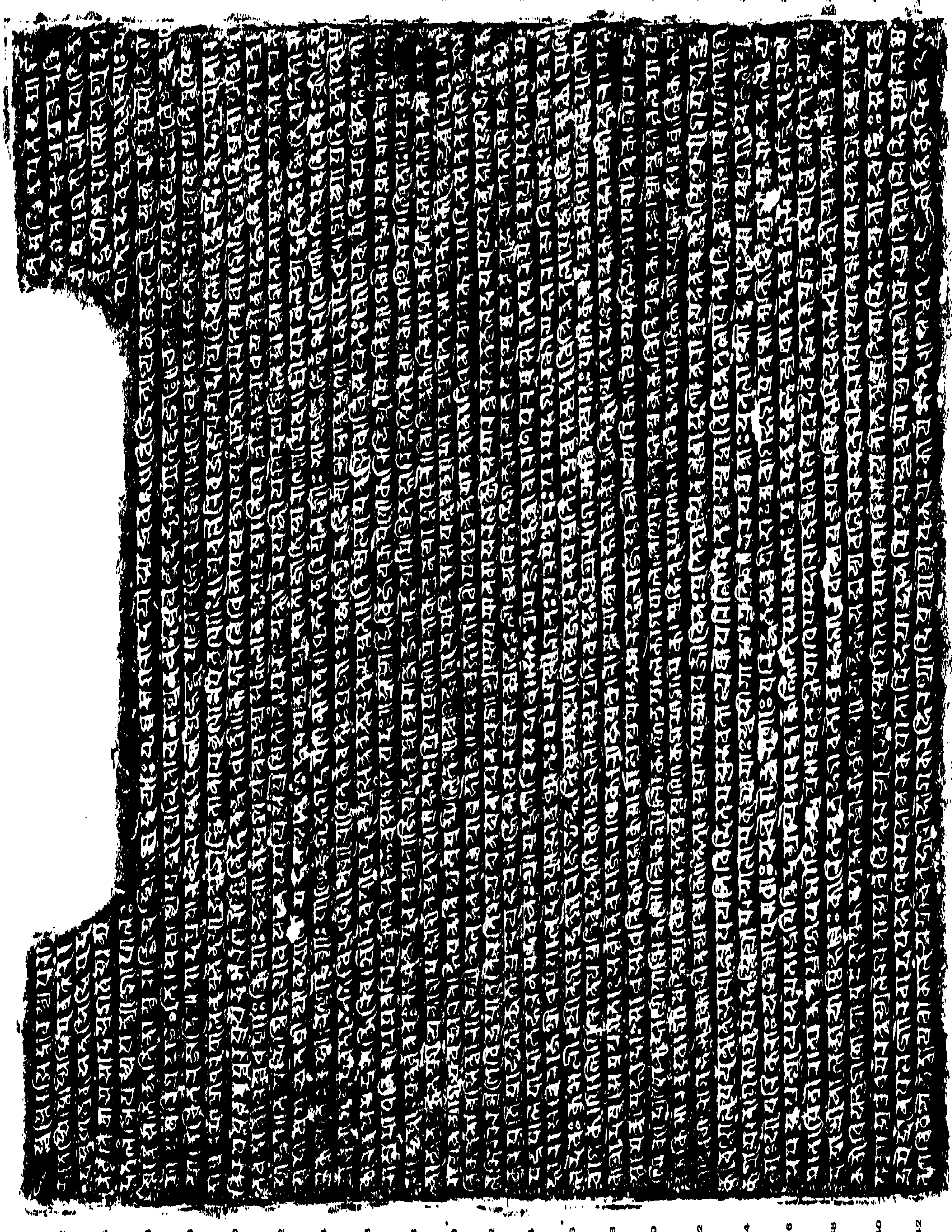
3 Kielhorn gave बान्धवाः

4 Kielhorn has चिरं वीक्षिताः

5 Kielhorn read सेतोः and remarked that the lithograph he used gave *sētu* (or *bhētu*). This inscription removes the possibility of *bhētu*. The readin must be सेतोः

6 Read °शिखर°.

7 Read °सन्देहादुदीची°.



A.—Obverse.

SCALE HALF SIZE

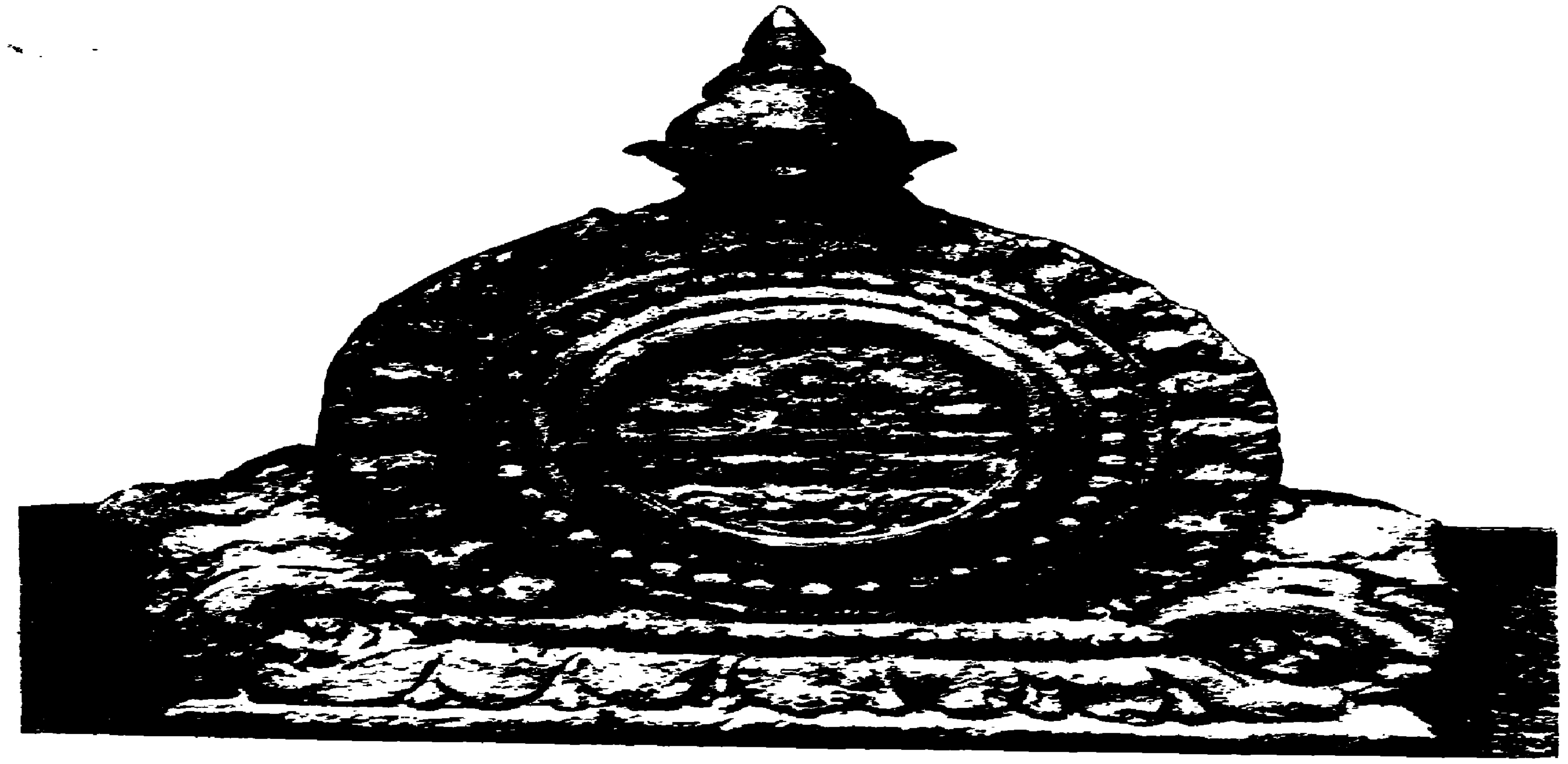
H. KRISHNA SASTRI

WHITTINGHAM & GRIGGS, COLL.



SEAL

(FROM PHOTO.)



(FROM IMPRESSION)



HALF SIZE

25 हाराजाधिराजश्रीधर्म्मपालदेवपादानुध्यातः
परमसौगतः परमेश्वरः परमभटा(ट्टा)रको महाराजाधिराजः श्रीमान्देवपा-
26 लदेवः
कुशली । श्रीनगरभुक्तौ राजगृहविषयान्तःपाति अजपुरनयप्रतिब(ब)द्ध-
स्वसम्ब(म्ब)द्धाविच्छिन्नतलोपेत । नन्दिवनाक । मणि-
27 वाटक । पिलिपिङ्कानयप्रतिब(ब) नटिका । अ-
चलानयप्रतिब(ब)द्ध ह[स्ति]ग्राम । गयाविषयान्तःपातिकुमुदसू[1] त्रवीथी-
प्रतिब(ब)द्ध पालाम-
28 कग्रामेषु । समुपगताम्(न्) सर्व्वानेव राज-
राणक । राजपुत्र । राजामात्य । महाकार्त्ताकृतिक । महादण्डनायक ।
महाप्रतीहार । महा-
29 सामन्त ।
महादौःसाधसाधनिक । महाकुमारा[मा*]त्य [।*] प्रमातृ । शरभङ्ग[।*]
राजस्थानी । औपरिक[2] । विषयपति [।*] दाशापराधिक । चौरोद्धर-
30 णिक । दाण्डि-
क [।*] दाण्डपाशिक [।*] शौल्किक [।*] [गौ]ल्मिक । क्षेत्रपाल [।*] कोटपाल ।
खण्डरक्ष [।*] तदायुक्तक । विनियुक्तक । हस्त्यश्वोष्ट्रनौब(ब)लव्यापृ-
31 तक[।*]
किशोरवडवागोमहिष्यधिकृत । दूतप्रे[ष]णिक । गमागमिक । अभित्व-
रमाणक । तरिक । तरपतिक । गौड(ड्र)-मालव-खश-कुलिक । कर्णा-
32 ट [ला]ट ।
चाटभ[ट*]सेवकादीनन्यांश्चाकीर्त्तितान् स्वपादपद्मोपजीविनः प्रतिवासि-
नश्च ब्राह्म(ह्म)णोत्तरान् महत्तमकुटुम्बि(म्बि)पुरोगमेदान्ध्र-
33 क । चण्डाल-
पर्य्यन्तान् समाज्ञापयति विदितमस्तु भवताम् यथोपरिलिखितस्वसम्ब(म्ब)-
द्धाविच्छिन्नतलोपेत नन्दिवनाकग्राम । मणिवाट-
34 कग्राम ।
नटिकाग्राम । हस्तिग्राम । पालामकग्रामाः स्वसीमातृणयूतिगोचरपर्य्यन्ताः
सतलाः सोद्देशाः साम्रमधूकाः सजलस्थ-
35 लाः
सोपरिकराः सदशापराधाः सचौरोद्धरणाः परिहृतसर्व्व(पीडाः) अचाटभटप्रवेशा
अकिंचित्प्रग्रा[ह्या]राजकुलीय-

[1] The symbol which has been read as त्र may be नु

[2] The *daṇḍa* between नी and औ was meant to be put after य to separate the word from the following *uparik*.

36 समस्तप्रत्यायसमेता भूमिच्छि-
द्रन्यायेनाचन्द्रार्कक्षितिसमकालम् पूर्व्वदत्तभुक्तभुज्यमानदेवब्र(ब्र)ह्मदेयवर्जिता:
मया

37 मातापित्रोरात्मन[श्च] पुण्ययशोभिवृद्धये ॥
सुव[र्ण्ण]द्वीपाधिपम[हा]राजश्रीवा(बा)लपुत्रदेवेन दूतकमुखेन वयम्विज्ञा-
पिता: यथा मया

38 श्रीनालन्दायाम्विहार: कारितस्तत्र
भगवतो बु(बु)द्धभट्टारकस्य प्रज्ञापारमितादिसकलधर्म्मनेत्रीस्थानस्यायार्थे तांच(चि)-

39 कवो(बो)धिसत्वगणस्याष्टमहापुरुषपुद्गलस्य
चातुर्द्दिशार्य्यभिक्षुसङ्घस्य ब(ब)लिचरुसत्रचीवरपिण्डपातशयनासनग्लानप्रत्ययभे-

40 षज्याद्यर्थं धर्म्म-
रत्नस्य लेखनाद्यर्थं विहारस्य च खण्डस्फुटितसमाधानार्थं शासनीकृत्य
प्रतिपादित[।*]: यतो भवद्भि: सर्व्वैरेव

41 भूमेर्द्दानपाल[न*]गौरवादपहरणे
च महानरकपातादिभयाद्दानमिदमभ्यनुमोद्य पालनीयं प्रतिवासिभिरप्याज्ञाश्र-

42 वणविधेयै-
र्भूत्वा यथाकालं समुचितभागभोगकरहिरण्यादिप्रत्यायोपनय: कार्य्य इति ॥
सम्वत् ३८ क(का)र्त्तिक दिने २१

Reverse.

43 तथाच धर्मानुश[1] स्सनश्लोका:
ब(ब)हुभिर्व्वसुधा दत्ता राजभि:

44 सगरादिभि:[।*]
यस्य यस्य यदा भूमिस्तस्य तस्य तदा फलम् ॥[१६॥]

45 स्वदत्तां परदत्तां वा [यो] ह[रे]त वसुन्धरां ।
स विष्ठायां कृमिर्भूत्वा पितृभि:

46 सह पच्यते ॥[१७*॥]
षष्टिम्वर्षसह[स्रा]णि स्वर्गे मोदति भूमिद: । आक्षेप्ता चानुमन्ता च
तान्येव

47 नरके वसेत् ॥[१८*॥]
यन्यदत्तां द्विजातिभ्यो यत्नाद्रक्ष युधिष्ठिर । मही महीभृतां श्रेष्ठ दा-

[1] Kielhorn gave धर्म्मानुशासन and suggested धर्म्मानुशासिन:. Perhaps शंसिन: is the reading intended.

48 माच्छेयो नु पालनम् ॥[१९*॥]
अस्मत्कुलक्रममुदारमुदा[ह]रद्भिरन्यैश्च दानमिदमभ्यनुमोदनीयं । लक्ष्म्यास्त-
डित्सलिलवुद्बु(बुद्बु)द[चं]-

49 चलाया
दानं फलं परयशःपरिपालनं च ॥[२०*॥] इति कमलदलाम्बु(म्बु)वि(बि)-
न्दुलोलां श्रियमनुचिन्त्य मनुष्यजीवितं च [।*] सकलमि-

50 दमुदाहृतं च बु(बु)[द्ध्वा]
न हि पुरुषैः परकीर्त्तयो विलोप्याः ॥[२१*॥] दक्षिणभुज इव राज्ञः
परव(ब)लदलने सहायनिरपेक्षः ।[।*]

51 दूत्यं श्रीव(ब)लवर्म्मा विदधे धर्म्माधिकारे[1]ऽस्मिन् ॥[२२*॥]
अस्मिन् धर्म्मारम्भे दूत्यं श्रीदेवपालदेवस्य । विदधे श्रीव(ब)लवर्म्मा
व्याघ्रतटीमण्डलाधिपतिः ॥[२३*॥]

52 आसीदशेषनरपालविलोलमौलि-
मालामणिद्युतिविवो(बो)धितपादपद्मः । शैलेन्द्रवंशतिलको यवभूमिपालः
श्रीवीरवैरिमथना-

53 नुगताभिधानः ॥[२४*॥]
हर्म्यस्थलेषु कुमुदेषु मृणालिनीषु शङ्खेन्दुकुन्दतुहिनेषु पदन्दधाना । निःशेष-
दिङ्मुखनिरन्तरलब्ध(ब्ध)गीतिः

54 मूर्त्तेव यस्य भुवनानि जगाम कीर्त्तिः ॥[२५*]
भ्रूभङ्गे भवति नृपा[2]स्य यस्य कोपाग्नि[भिं]न्नाः सह हृदयैर्द्विषां
श्रियोपि । वक्राणामि-

55 ह हि परोपघातदक्षा
जायन्ते जगति भृष[3]क्षतिप्रकाराः ॥[२६*॥] तस्याभवन्नयपराक्रमशीलशाली
राजेन्द्रमौलिशतदुर्ल्लङ्कितांघ्रि-

56 युग्मः ।
सूनुर्युधिष्ठिरपराशरभीमसेनकर्णार्ज्जुनार्ज्जितयशाः समराग्रवीरः[4] । [।२७*॥]
उद्भूतम[5]स्व(स्व)रतलाघ(घु)धि सञ्चरन्त्या यस्सेनयावनिरजःप-

57 टलं पदोत्थम् ।
कर्ण्णानिलेन करिणां शमकम्पितोच्चगण्डस्थलीमदजलैः शमयाम्ब(म्ब)-
भूव ।[।२८*॥] मत्त्वापप्रमिवेदमभूद्भवनमण्डलं ।

[1] The use of *avagraha* may be marked.

[2] This *daṇḍa* is unnecessary.

[3] Read भृश°. Symbol for *sh* is used for that of *ś*.

[4] Or °धीरः.

[5] It is better to read मास्वर°

58 कुलम्दैत्याधिपस्येव यच्चमोभिरनारतम् ॥[२८*]
पौलोमीव सुराधिपस्य गिरिजा कन्दर्पयोनेरिव [प्रीतिः][1] श्रीखण्डतेव मन्मथरि-
59 पोर्लक्ष्मीर्मुरारेरिव ।
राज्ञः सोमकुलान्वयस्य महतः श्रीधर्मसेतोः[2] सुता तस्याभूदवनीभुजोऽ[3]समल्लिकी तारेव ताराह्वया ॥[३०*॥] माया-
60 यामिव कामदेवविजयी शुद्धोदनस्यात्मजः
स्कन्दो नन्दितदेववृन्दहृदयः शर्व्वादुमायामिव । तस्मात्तस्य नरेन्द्रवृन्दवि-नमत्पादारवि-
61 न्दासनः
सर्व्वोर्व्वीपतिगर्व्वखर्व्वणचणः श्रीबा(वा)लपुत्रोऽभवत्[4] ॥[३१*॥] नालन्दागुण-वृन्दलुब्ध(ब्ध)मनसा भक्त्या च शौद्धोदनेर्बु(बु)द्ध्वा शैलसरित्तरंगतरलां
62 लक्ष्मीमिमां शोभनाम् ।
यस्तेनोन्नतसौधधामधवलः सत्रार्थमित्थंश्रिया नानासद्गुणभिक्षुसङ्घवसतिस्तस्या-
कविहारः कृतः ॥[३२*॥] भक्त्या
63 तत्र समस्तयुवनितावैधव्यदीक्षागुरुं
कृत्वा शासनमाश्रितानुरक्तया यत्प्रार्थ्य दूतेरसौ । ग्रामान् पञ्च विपश्चितोपरि-यथोद्देश्या-
64 निमानात्मनः
पित्रो[र्लो]कहितोदयाय च ददौ श्रीदेवपालं नृपं ॥[३३*॥] यावत्सिन्धोः प्रव(ब)न्धः पृथुलहरजटाशोभिताङ्गा च गङ्गा गुर्व्वी
65 धत्ते फणीन्द्रः प्रतिदिनमचलो वेलया यावदुर्व्वी ।
यावच्चास्तोदयाद्री रवितुरगखुरोत्कृष्टचूडामणी स्तस्तावत्कीर्त्तिरेषा प्रभव-
66 तु जगतामस्त्वरित्त्रया रोपयंती ॥[३४*॥]

TRANSLATION.

Lines 1-25 are translated in the Mungīr grant edited by Kielhorn in *Indian Antiquary*, Vol. XXI, pp. 257-258.

Ll. 26-33. In the Śrīnagara-*bhukti*, at the villages falling within the district (*vishaya*) of Rājagṛiha, namely, Nandivanāka and Maṇivāṭaka, which come within the territorial subdivision (*naya*) of Ajapura, together with the undivided lands connected therewith; Naṭikā which comes within the subdivision (*naya*) of Pilipiṇkā and Hastigrāma which comes within the

[1] Both these letters are doubtful. Saṅkalpayōni, *i.e.* Kāmadēva has four wives, as stated in the *Vishṇudharmōttariya*, III, 73, 21, namely, Rati, Prīti, Śakti and Madaśakti. Either of the two names *Prīti* and *Śakti* will fit in, but the former seems preferable.

[2] May be read as वर्म्मसेती also.

[3] The use of the *avagraha* may be marked.

[4] Ditto.

subdivision (*naya*) of Achalā and the village of Pālāmaka which comes under the subdivision (*vīthī*) of Kumudasūtra (or Kumudasūnu), that falls within the limits of the district (*vishaya*) of Gayā—Dēvapāladēva, being in good health, issues commands to all the persons who have assembled here,—the *Rājarāṇaka*[1], the *Rājaputraka*, the *Rājāmātya*, the *Mahākārttākṛitika*, the *Mahādaṇḍanāyaka*, the *Mahāpratīhāra*, the *Mahāsāmanta*, the *Mahādauḥsādhasādhanika*, the *Mahākumārāmātya*, the *Pramātṛi*, the *Śarabhaṅga*, the *Rājasthānīya*, the *Uparika*, the *Vishayapati*, the *Daśāparādhika*, the *Chaurōddharaṇika*, the *Dāṇḍika*, the *Dāṇḍapāśika*, the *Śaulkika*, the *Gaulmika*, the *Kshētrapāla*, the *Kōṭapāla*, the *Khaṇḍaraksha*, the *Tadāyuktaka* the *Viniyuktaka*, the *Hastyaśvōshṭranaubalavyāpṛitaka*, the *Kiśōra-vaḍavā-gō-mahishyadhikṛita*, the *Dūtapraishaṇika*, the *Gamāgamika*, the *Abhitvaramāṇaka*, the *Tarika*, the *Tarapatika*, the *Ōḍras* (men from Orissa), the *Mālavas*, the *Khaśas*, the *Kulikas*, the *Karṇṇāṭas*, the *Hūṇas*, the *Chāṭas* (or village officers), the *Bhaṭas*, the servants and others, dependent on his lotus-feet, who are not named here, and the residents, the Brahmaṇōttaras, the village-elders, householders, the *purōgas*, the *Mēdas*, the *Andhrakas* down to the *Chāṇḍālas*—

Ll. 33-37. Be it known to you that the above-mentioned villages, namely, the village of Nandivanāka, the village of Maṇivāṭaka, the village of Naṭikā, the village of Hasti (or Hastigrāma) and the village of Pālāmaka, together with the undivided lands attached to them, unbroken up to their boundaries, grass and pasture-lands,[2] with their grounds, places, mango and *madhūka* (*Bassia Latifolia*) trees, with their water and dry lands, *uparikaras*, *daśāparādhas*, *chaurōddharaṇas*, free from all troubles, exempt from the entry of the *chāṭas* (village officers), and *bhaṭas*, with all taxes due to the king's family or court, with nothing of these to be recovered, according to the maxim of *bhūmichchhidra*, to last as long as the moon and the sun and the earth shall endure, excluding the gifts to gods, and the Brahmans, which were granted before and were enjoyed or are being enjoyed—

Ll. 37-42 are granted by us for the increase of the spiritual merit and glory of my parents and of myself—We being requested by the illustrious Mahārāja **Bālaputradēva**, the **King of Suvarṇṇadvīpa** through a messenger "I have caused to be built **a monastery at Nālandā**" granted by this edict toward the income for the blessed Lord Buddha, the abode of all the leading virtues like the *pra jñāpāramitā*, for the offerings, oblations, shelter, garments, alms beds, the requisites of the sick like medicines, etc., of the assembly of the venerable *bhikshus* of the four quarters (*comprising*) the Bodhisattvas well versed in the *tantras*, and the eight great holy personages (i. e. the *ariya-puggalas*), for writing the *dharma-ratnas* or Buddhist texts and for the upkeep and repair of the monastery (when) damaged; therefore, this grant should be approved and preserved by all of you[4] out of regard for the merit of protecting gifts of land and because in the confiscation of the same there is a fear of falling into the great hell and the like. The residents also should be obedient to the order on hearing it and

[1] Many of these designations hardly admit of translation. They all occur in several grants and have already been noticed by scholars. So they are left untranslated here.

[2] तृणयूतिगोचर is usually so translated and यूति is practically left untranslated.

[3] Dr. Thomas is of opinion that the term Bōdhisattva is used here to indicate the monks and would read *tatraka* in place of *tāntraka* He further thinks that *Buddhabhaṭṭārakasya* depends on *sthānasya*. The term *dharmanētrī* occurs in the *Saddharmapuṇḍarīka*, I, 10, 79; II, 102; XI, 5, 7. Burnouf translates it: "la regle de la loi," i.e. the rule of the Law." For *ashṭa* ... *pudgalasya* see Childers, Pāli Dictionary under *ariyapuggalo* and *puggalo*.

[4] Dr. Krōm of Leiden also thinks that the message sent by Bālaputra to Dēvapāla is only contained in the words: "*Śrī-Nālandāyāṁ vihāraḥ Kāritaḥ*"; for, if we assume that the message includes the whole passage as far as *iti* (l. 42) it is not clear who are meant by the words *bhavadbhiḥ sarvairēva* (l. 40). These words cannot be applied to King Dēvapāla. Evidently they refer to that king's officials mentioned previously. These remarks appear to be justified but then we would require *iti* after *kāritas*-

should bring to the donees at the proper time the due revenues such as *bhāgabhōgakara*, gold, etc." **Saṁvat (year) 39, Kārttika, day 21.**

Ll. 43-50. In pursuance thereof are the (following) verses (nos. 16-21) announcing duties (regarding grants)[1].

V. 22. The illustrious **Balavarmman** who was the right hand of the king, as it were, and who never depended on (others') help for crushing hostile forces, acted as messenger in this religious function.

V. 23. In this religious undertaking **Balavarmman**, the illustrious ruler of the **Vyāghrataṭī-maṇḍala**, acted as a messenger of the illustrious (Emperor) Dēvapāladēva.

V. 24. There was a King of **Yavabhūmi** (or Java), who was the ornament of the **Śailēndra dynasty**, whose lotus-feet bloomed by the lustre of the jewels in the row of trembling diadems on the heads of all the princes, and whose name was conformable to the illustrious tormentor of brave foes (*vīra-vairi-mathana*).

V 25. His fame, incarnate, as it were, by setting its foot on the regions of (white) palaces, in white water-lilies, in lotus plants, conches, moon, jasmine and snow and, being incessantly sung in all the quarters, pervaded the whole universe.

V. 26. At the time when that king frowned in anger, the fortunes of the enemies also broke down simultaneously with their hearts. Indeed the crooked ones in the world have got ways of moving which are very ingenious in striking others[2].

V. 27. He had a son, who possessed prudence, prowess, and good conduct, whose two feet fondled too much with hundreds of diadems of mighty kings (bowing down). He was the foremost warrior in battle-fields and his fame was equal to that earned by Yudhisthira, Parāśara, Bhīmasēna, Karṇṇa and Arjuna.

V. 28. The multitude of the dust of the earth, raised by the feet of his army, moving in the field of battle, was first blown up to the sky by the wind, produced by the (moving) ears of the elephants, and, then slowly settled down on the earth (*again*) by the ichor, poured forth from the cheeks of the elephants.

V. 29. By the continuous existence of whose fame the world was altogether without the dark fortnight, just like the family of the lord of the *daityas* (demons) was without the partisanship of Krishṇa[3].

V. 30. As Paulōmī was known to be (the wife of) the lord of the *Suras*, (*i.e.* Indra) Rati[4] the wife of the mind-born (Cupid), the daughter of the mountain (Pārvatī), of the enemy of Cupid (*i.e.* Śiva) and Lakshmī of the enemy of Mura (*i.e.* Vishṇu) so **Tārā** was the queen consort of that king, and was the daughter of the great ruler **Dharmasētu**[5] of the lunar race and resembled **Tārā** (the Buddhist goddess of this name) herself.

V. 31. As the son of Śuddhōdana, (*i.e.* the Buddha) the conqueror of Kāmadēva, was born of **Māyā** and Skanda, who delighted the heart of the host of gods, was born of Umā by Śiva, so was born of her by that king, the illustrious **Bālaputra**, who was expert in crushing the pride

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[1] Here come six imprecatory and benedictory stanzas, too well-known to be translated. The stanza सर्व्वानेतान् भाविनः पार्थिवेन्द्रान् which is given in the Mungīr grant is here left out.

[2] The eyebrows become crooked in frowning and the poet by way of *arthāntara-nyāsa* draws a general inference from it.

[3] Pun on the words *Kṛishṇa* and *paksha*. Fame is white or bright cf. मालिन्यं व्योम्नि पापे यशसि धवलता वर्ण्यते हासकीर्त्योः Sāhityadarpaṇa, VII-23.

[4] The exact word which certainly has only two letters is not distinct. It may be either Prīti or Śakti as noted above, f.n., p. 324. That Rati is meant is absolutely clear from the context.

[5] This name can be read as Varmasētu also.

of all the rulers of the world, and before whose foot-stool (the seat where his lotus-feet rested) the groups of princes bowed.

V. 32. With the mind attracted by the manifold excellences of Nālandā and through devotion to the son of Śuddhōdana (the Buddha) and having realised that riches was fickle like the waves of a mountain stream, he whose fame was like that of Saṅghārthamitra[1], built there (at Nālandā) a monastery which was the abode of the assembly of monks of various good qualities and was white with the series of stuccoed and lofty dwellings.

V. 33. Having requested, King Dēvapāladēva, who was the preceptor for initiating into widowhood the wives of all the enemies, through envoys, very respectfully and out of devotion and issuing a charter, (he) granted these five villages, whose purpose has been noticed above for the welfare of himself, his parents and the world.

V. 34. As long as there is the continuance of the ocean, or the Ganges has her limbs (the currents of water) agitated by the extensive plaited hair of Hara (Śiva), as long as the immovable king of snakes (Śēsha) lightly bears the heavy and extensive earth every day and as long as the (*Udaya*) Eastern and (*Asta*) Western mountains have their crest jewels scratched by the hoofs of the horses of the Sun so long may this meritorious act, setting up virtues over the world, endure.

No. 18.—MATTEPAD PLATES OF DAMODARAVARMAN.

BY PROFESSOR E. HULTZSCH, PH.D.; HALLE (SAALE).

This inscription is engraved on **five** very thin **copper-plates**, which were found in the village of **Maṭṭepāḍ** in the Ongole Tāluk of the Guṇṭūr District and forwarded to Rao Bahadur H. Krishna Sastri by the Tahsildar of Nellore. The plates measure 6⅝ inches in breadth and 1½ inches in height. There are eight inscribed faces, the outer faces of the first and last plates having been left blank. Each inscribed face bears only two lines of writing. The margins of the plates are not raised into rims, but the writing is in fair preservation. The five copper-plates are strung on a **ring** of the same metal, passing through a hole of about ⅜" in diameter on the left side of the writing. The two ends of the ring, which is about 2⅓" in diameter, are fixed in the base of an oval **seal**, which is much worn; it seems to bear, in relief, the figure of a seated bull, facing the proper right. The weight of the plates, with ring and seal, is 30½ tolas.

The **alphabet** is of an early Southern type. The *Jihvāmūlīya* occurs in line 7, and the *Upadhmānīya* in line 16; final forms of *t* and *m* in lines 1, 7, and 15, 16 (twice), respectively. As in the case of the plates of Chārudēvī (above, Vol. VIII, No. 12) and of Vijaya-Dēvavarman (Vol. IX, No. 7), the eight inscribed faces are numbered consecutively, like the pages of a modern book, with the **numerical symbols** 2, [3], 4, 5, 6, 7, 8 on the left margin; the first plate seems to bear, just as that of Dēvavarman,[2] the sacred syllable *ōṁ* in the place of the figure 1. The symbol 2 occurs also in the date (l. 14), and the symbol 1 repeatedly in lines 8-13

The **language** of the plates is Sanskrit mixed with Prākṛit. Lines 1-14 are in prose, and the two last lines in verse. In the **Sanskrit** portion consonants following *r* are doubled, with the exception of *t* in *kartum*- and of *h* in *arhanti* (l. 6). The Sandhi is neglected after °*purāt* (l. 1), °*tasya* and -*sagōtrasya* (l. 2), -*grāmēyakāḥ* (l. 4), -*grāmaḥ* (l. 5), and *bhūmiḥ* (l. 15).

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[1] This might possibly mean that his wealth befriended the cause of the *Saṅgha*.

[2] See above, Vol. IX, p. 57.

In lines 8-13 the proper names of the donees and most of the names of their *gōtras*[1] are given in **Prākrit**, and in line 14 the Prākrit form *-saṁvachchharaṁ* occurs. The only other declensional forms are the nominative singular *aṁśo* (for which we would have expected *aṁso*) and the genitive singular *-ajjassa* (= *-āryasya* in Sanskrit) in lines 8-13. The vowel *au* has become *o* in *Koṇḍinna* (= *Kauṇḍinya*, ll. 8-11). Sanskrit *p* and *b* have been changed to *v* in *Kassava* (= *Kāśyapa*, l. 11 f.) and *Savarajja* (= *Śabarārya*, l. 10). Consonant groups are assimilated; but *śrī* is represented by *siri* in *Sirijja* (l. 9). This name, as well as *Nandijja*[2] (= *Nandyārya*, ll. 8, 13), *Aggijja* (= *Agnyārya*, ll. 9, 11), *Āgasti* (= *Agastya*, l. 13), and *Veṇujja* (for which we would have expected *Veṇhujja*[3] = *Vishṇvārya*, l. 12), are instances of Samprasāraṇa (*i* = *ya*, and *u* = *va*).

The inscription records that, in the **2nd year** of his reign (l. 14), the Mahārāja **Dāmōdaravarman** (l. 3) granted the village of **Kaṅgūra** to a number of Brāhmaṇas. He was a worshipper of 'the truly and perfectly Enlightened one' (*Samyak-saṁbuddha*, l. 1), i.e. of the **Buddha**. At the same time he boasts of having performed certain Brāhmaṇical rites, viz. *Gō-sahasra* and *Hiraṇyagarbha* (l. 2 f.). These are the names of the second and fifth of the sixteen so-called 'great gifts' (*mahādāna*) of the Purāṇas.[4] A similar feat is ascribed to king **Attivarman** in another copper-plate grant from the Guṇṭūr District, where I translate the epithet *apramēya-Hiraṇyagarbha-prasavēna*[5] by 'who is a producer of (i.e. who has performed) innumerable *Hiraṇyagarbhas*.' That this Attivarman (whose name seems to be a Prākṛitic or Dravidian form of *Hastivarman*) belonged to the same dynasty as Dāmōdaravarman, is evident from the fact that his family is stated to be 'descended from the lineage of the great sage **Ānanda**' (ibid., text l. 1), while Dāmōdaravarman claims to have belonged to the *gōtra* of **Ānanda** (below, text l. 2). Moreover, Dāmōdaravarman resided at a city called **Kandarapura** (below, text l. 1), which must have received its name from that prince **Kandara** who is mentioned as an ancestor of Attivarman.[6] The characters of the copper-plate grant of this king are decidedly more developed than those of the subjoined grant, which, besides, is partially in Prākṛit, while the former is all in Sanskrit. Consequently, Dāmōdaravarman must have been one of the predecessors of Attivarman.

When editing the Gōraṇṭla plates of Attivarman, my late lamented friend Fleet believed this king to have been a Pallava,[7]—chiefly because he interpreted the epithet *apramēya-Hiraṇyagarbha-prasavēna* by 'who is of the posterity of the inscrutable (god) Hiraṇyagarbha.' As I have shown above, this rendering is inadmissible in the light of the corresponding epithet used in the fresh plates, and Fleet himself had since withdrawn his original opinion in his *Dynasties of the Kanarese Districts*, second edition, p. 334. Henceforth **Kandara, Dāmōdaravarman**, and **Attivarman** (Hastivarman) may be designated as '**kings of the family of Ānanda.**'

The two **localities** mentioned in the subjoined inscription—Kandarapura (l. 1) and Kaṅgūra (l. 4 f.)—I am unable to identify. But the first of the two villages referred to in the grant of Attivarman—**Tānṛikonṛa**[8]—is probably identical with Tāḍikoṇḍa, 10 miles north of Guṇṭūr[9] and south of the Kṛishṇā river, and the second village—**Āntukkūra**[10]—with Gani-Ātukūru, west

[1] In line 13 the names of the *gōtras* are in Sanskrit.
[2] Cf. *Nandiji* and *Gonandija*, above, Vol. I, p. 6, text l. 21, and Vol. VI, p. 87, text l. 9.
[3] Cf. *Rudavenhuja*, above, Vol. VI, p. 317, text l. 16.
[4] See Hēmādri's *Dānakhaṇḍa*, chapter 5, and cf. also *Ep. Ind.*, Vol. I, p. 368, verse 18 and note 58.
[5] *Ind. Ant.*, Vol. IX, p. 102, text l. 3.
[6] Loc. cit., text l. 2. These coincidences were first pointed out in the Madras Epigraphical Report for 1920, p. 95.
[7] See *Ind. Ant.*, Vol. IX, p. 102.
[8] *Ind. Ant.*, Vol. IX, p. 103, text l. 7. Fleet read *Tānthikontha*.
[9] See Mr. R. Sewell's *Lists*, Vol. I, p. 76.
[10] *Ind. Ant.*, Vol. IX, p. 103, text l. 8.

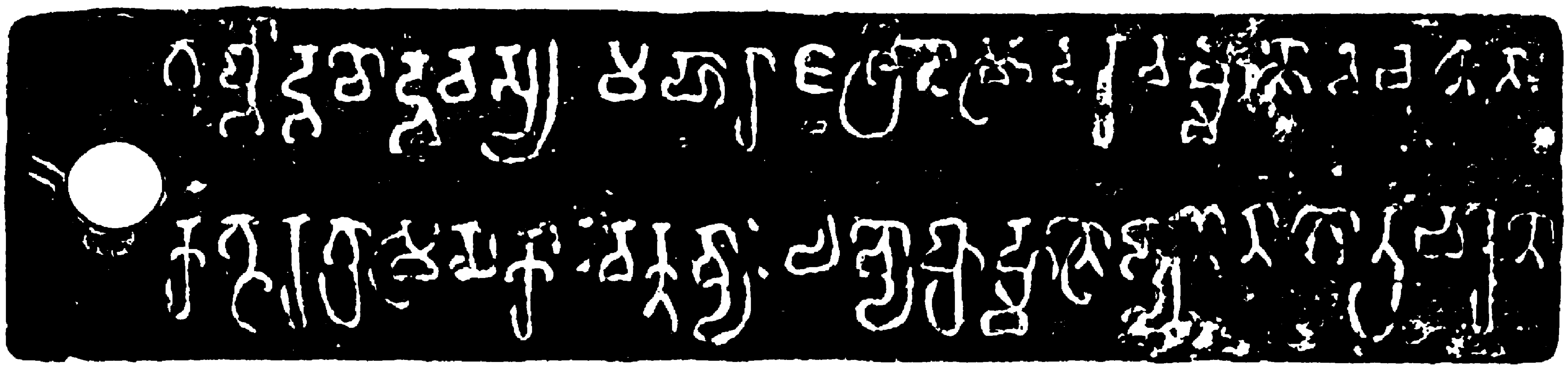
Mattepad Plates of Damodaravarman.

i.



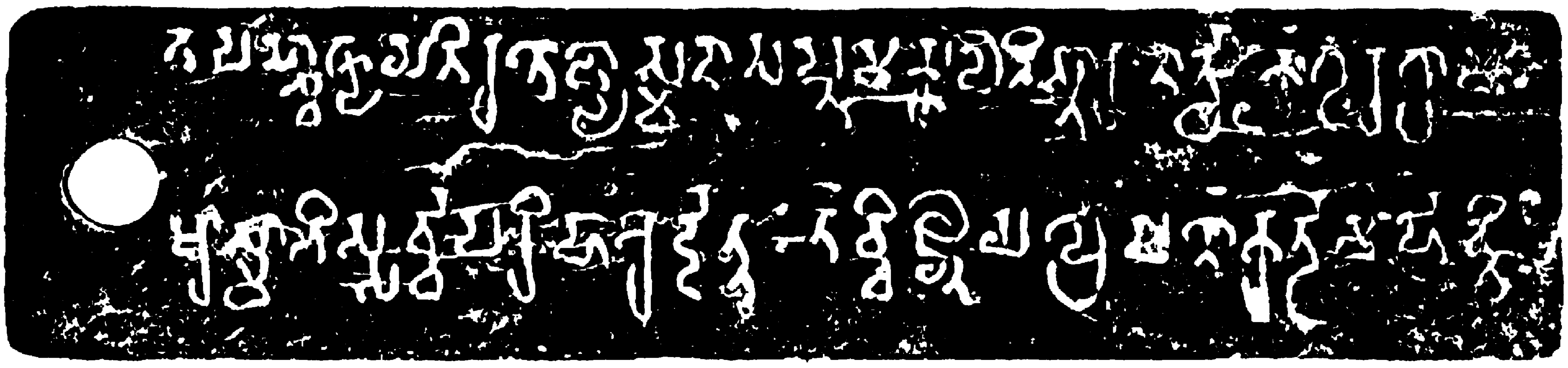
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ii a.



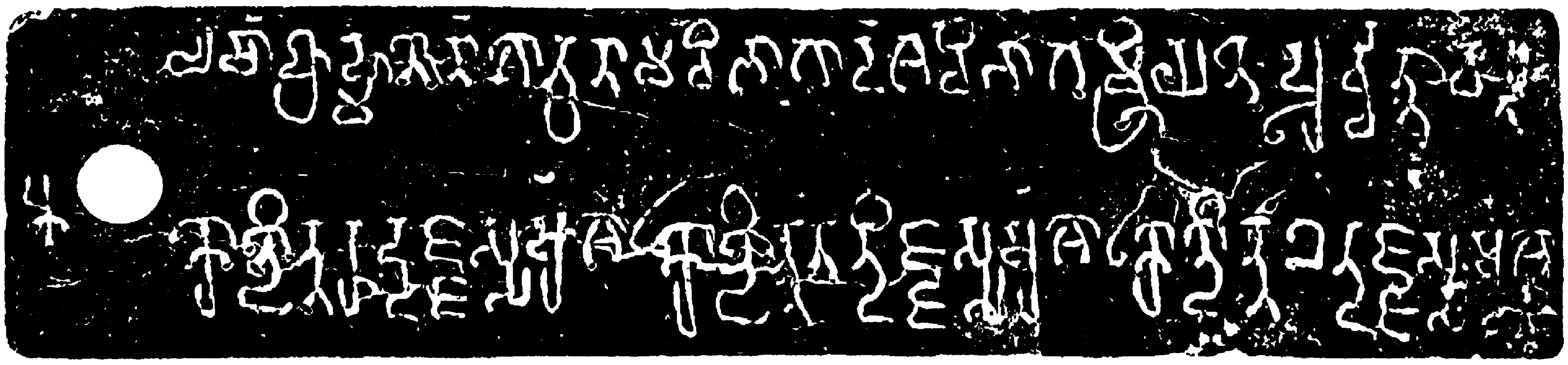
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ii b.



6

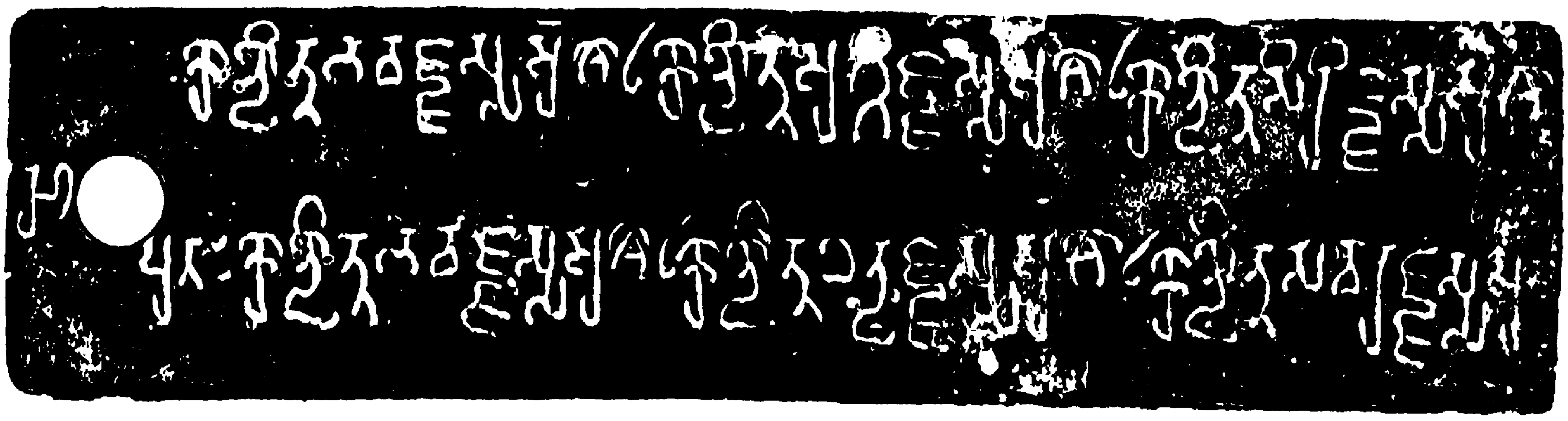
iii a.



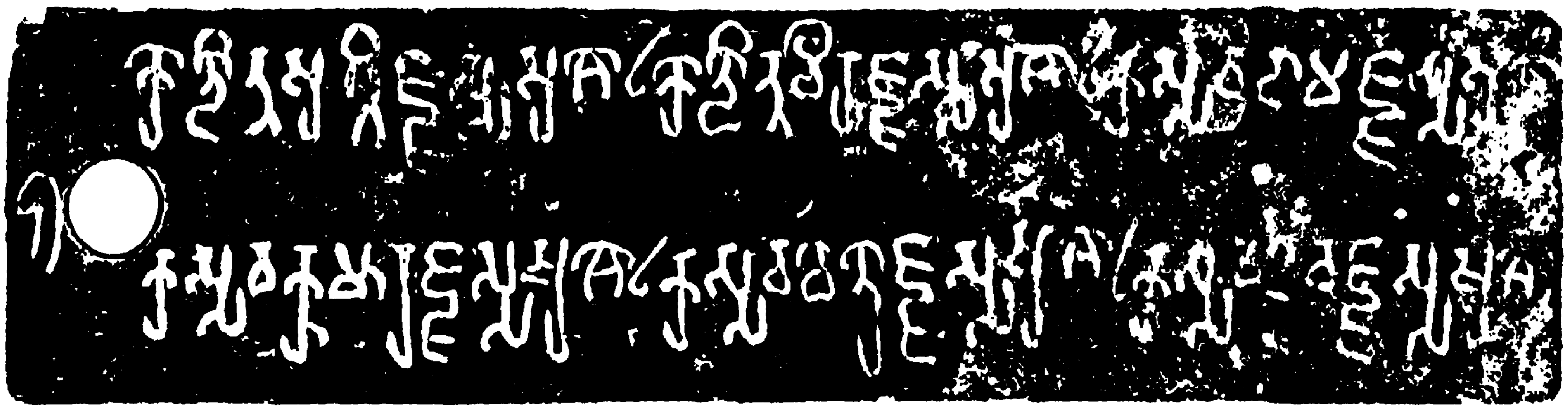
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H. KRISHNA SASTRI. SCALE FULL SIZE WHITTINGHAM & GRIGGS, PHOTO-LITH.

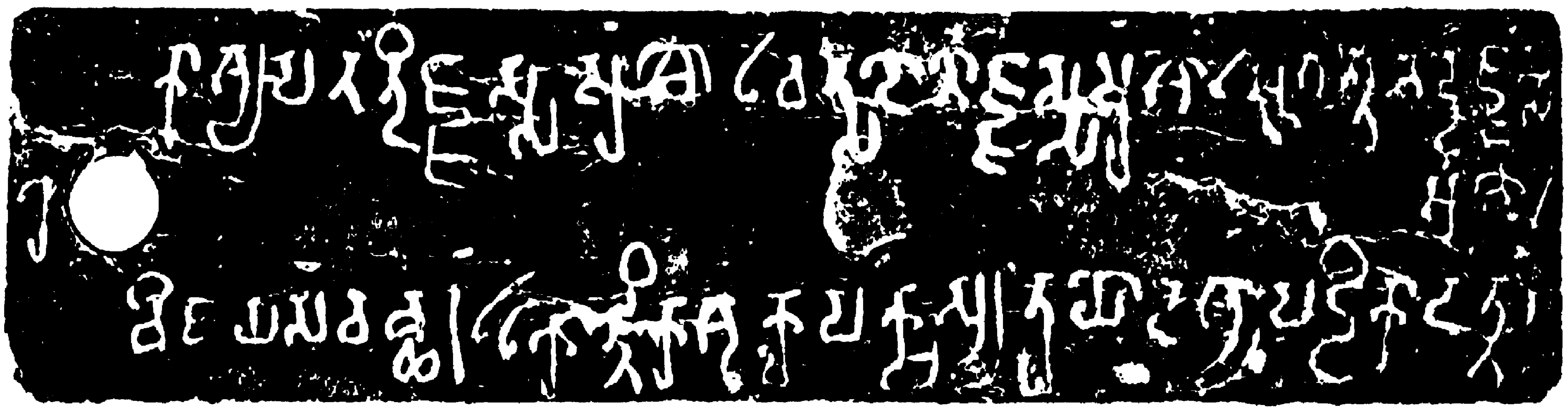
iii b.



iv a.



iv b



v.



of Bezvâḍa.[1] Gōraṇṭla, where the plates of Attivarman were obtained,[2] is 4 miles north of Guṇṭûr.[3] Finally, Venkayya's Report for 1900, pp. 5, 35, notes a much defaced Sanskṛit inscription mentioning the daughter of king Kandara of the Ânanda *gōtra*, at Chēzarla, west of Guṇṭûr.

TEXT.[4]

First Plate; Second Side.

1 विजयकन्दरपुरात् [भ]गवतः सम्यक्संबुद्धस्य पादानुध्या-

2 तस्य आ[न]न्दसगोत्रस्य अ[वन्ध्य]गोसह[स्रानै]कहिरण्य-

Second Plate; First Side.

3 गर्ब्भोद्भवोद्भवस्य महाराजश्रीदामोदरवर्म्मणो वचनेन

4 कंगूरग्रामेयका(:) वक्तव्याः [।*] एभ्यो ब्राह्मणे[भ्यो] नानागोत्रचरण-

Second Plate; Second Side.

5 तपस्स्वाध्यायनिरतेभ्योस्मदाससमकुलनिस्तारण[।*]र्त्थं कंगूरग्रामः

6 अस्माभिस्सर्व्वपरिहारैर्द्दत्तः [।] तंद्विज्ञाय[5] प्रे[ष]णं कर्तुमर्हन्ति [।]

Third Plate; First Side.

7 एषां ब्राह्मणानां गोत्रनामविभागादंशविभागक्क्रियते [।*] पूर्व्वन्तावत्

8 कौण्डिन्यरुद्दज्जस्य अंशो १ कौण्डिन्यनन्दिज्जस्य अंशो १ कौण्डिन्यखन्दज्जस्य अंशो

Third Plate; Second Side.

9 कौण्डिन्यभवज्जस्य अंशो १ कौण्डिन्यअग्गिज्जस्य अंशो १ कौण्डिन्यसिरि-ज्जस्य अंशो

10 पुनः कौण्डिन्यभवज्जस्य अंशो १ कौण्डिन्यखन्दज्जस्य अंशो १ कौण्डिन्य-सवरज्जस्य अं[शो]

Fourth Plate; First Side.

11 कौण्डिन्यअग्गिज्जस्य अंशो १ कौण्डिन्यवीरज्जस्य अंशो १ काश्यपदामज्जस्य [अंशो]

12 काश्यपकुमारज्जस्य अंशो १ काश्यपवेण्हुज्जस्य अंशो १ काश्य[पदे]वज्जस्य अंशो

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[1] See above, Vol. VIII, p. 10.

[2] *Ind. Ant.*, Vol. IX, p. 102.

[3] Mr. Sewell's *Lists*, Vol. I, p. 74.

[4] From ink-impressions supplied by Rao Bahadur H. Krishna Sastri.

[5] Read तद्विज्ञाय.

Fourth Plate ; Second Side.

13 काश्यपनन्दिज्जस्स भंगो १ वत्सदोणज्जस्स भंगो आगस्तिभद्दज्जस्स भंगो १[1] [।*]

14 विजयसंवच्छरं २ कार्त्तिकशुद्धपक्खस्य त्रयोदश्यां पट्टिका दत्ता [।*]

Fifth Plate ; First Side.

15 बहुभिर्व्वसुधा दत्ता बहुभिश्चानुपालिता [।*] यस्य यस्य यदा भूमिः[2] तस्य तस्य तदा फलम् ॥

16 स्वदत्तां परदत्तां वा यो हरेत्तु वसुन्धराम् [।] गवां [3]गतसहस्रस्य हन्तुः पिबति दुष्कृतम् ॥

TRANSLATION.

(Line 1.) From **Kanderapura,** (the city) of victory, the villagers of **Kangūra** have to be addressed (as follows) by the word of the glorious Mahārāja **Dāmōdaravarman,** who meditates on the feet of the blessed **Samyak-sambuddha**; who belongs to the *gōtra* of **Ānanda**; (and) who is the origin of the production (i.e. who has caused the performance) of many *Hiraṇya-garbhas*[4] and of (gifts of) thousands of pregnant cows.

(L. 4.) 'For the sake of Our salvation as far as the seventh generation, the village of **Kangūra** has been given by Us, with all exemptions, to the following Brāhmaṇas of various *gōtras* and *charaṇas*, and practising austerities and recital of their sacred texts. Knowing this (the villagers) should render service (to them).'

(L. 7.) The allotment of shares is (now) made to these Brāhmaṇas, with specification of (their) *gōtras* and names. First then, to the Koṇḍinna Ruddajja (Rudrārya) 1 share; to the Koṇḍinna Nandijja (Nandyārya) 1 share; to the Koṇḍinna Khandajja (Skandārya) (1) share; to the Koṇḍinna Bhavajja (Bhavārya) 1 share; to the Koṇḍinna Aggijja (Agnyārya) 1 share; to the Koṇḍinna Sirijja (Śryārya) (1) share; again to the Koṇḍinna Bhavajja 1 share; to the Koṇḍinna Khandajja 1 share; to the Koṇḍinna Savarajja (Śabarārya) (1) share; to the Koṇḍinna Aggijja 1 share; to the Koṇḍinna Virajja (Vīrārya) 1 share; to the Kassava Dāmajja (Dāmārya) (1) share; to the Kassava Kumārajja (Kumārārya) 1 share; to the Kassava Veṇujja (Vishṇvārya) 1 share; to the Kassava Devajja (Dēvārya) (1) share; to the Kāśyapa Nandijja 1 share; to the Vatsa Doṇajja (Drōṇārya) 1 share; to the Āgasti Bhaddajja (Bhadrārya) 1 share.

(L. 14.) **(In) the year of victory 2, on the thirteenth (tithi) of the bright fortnight of Kārttika,** (this) set of plates[5] has been given (to the donees).

[Line 15 f. contain two of the customary ślōkas.]

No. 19.—URLAM PLATES OF HASTIVARMAN ; THE YEAR 80.

BY PROFESSOR E. HULTZSCH, PH.D. ; HALLE (SAALE).

This is a set of **three copper-plates,** measuring $7\frac{1}{2}$ inches in breadth and $2\frac{1}{2}$ inches in height. The outer face of the first plate has been left blank, while the second and third plates

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[1] भंगो १ is entered below the line.

[2] Read भूमिस्त°.

[3] Read शत°.

[4] See the introductory remarks.

[5] *paṭṭikā* is used in the same sense in other copper-plate grants. See above, Vol. I, p. 7, text l. 51; Vol. VI, p. 14 text l. 18; p. 88, text l. 28; p. 318, text l. 40; Vol. VIII, p. 240, text l. 40.

bear writing on both sides. The margins of the plates are not raised into rims, but the writing is in good preservation. The plates are strung on a copper **ring**, which is passed through a hole about ½" in diameter near the left margin of the writing. The ring is about 3" in diameter and now carries no seal; but there are clear traces of a seal having once been soldered on it. The weight of the plates, with the ring, is 42 tolas.

The plates were received by Rao Bahadur H. Krishna Sastri from Mr. K. Nagesvara Rao, Editor of the 'Andhra Patrika,' who stated that they are the private property of the Raja of **Urlām**, Chicacole taluk, Ganjam District. Mr. T. Rajagopala Rao has already published the text of the inscription on them in his journal 'South-Indian Research' for July 1919.

The **alphabet** is of an early Southern type and closely resembles that of the Achyutapuram plates of the Gāṅga Mahārāja Indravarman I of Kaliṅga,[1] which were drafted by the same officer as the Urlām plates. A final form of *m* occurs at the end of the inscription, while it is replaced by *Anusvāra* in *phalaṁ* (l. 20) and °*pālanaṁ* (l. 21). The two **numerical symbols** 8 and 80 are used in the date (l. 23), where 80 is expressed by the numerical symbol 80 and a superfluous cipher added to it.

The **language** is Sanskrit, prose and five verses (ll. 19-22, 23-26). As to **orthography**—*v* is used for *b* in °*vādhā* (l. 14). The syllable *ri* is replaced by the vowel *ṛi* in the second syllable of *kṛitṛimā* (l. 17). *Anusvāra* is represented by guttural *ṅ* in *Rājasiṅhasya* (l. 24) and *-saṅghatēḥ* (for *-saṁhatēḥ*, l. 25). Consonants are doubled after *r*, with the exception of *sh* (in *varsha-*, l. 2); and *dh* is doubled before *y* in *-ānuddhyātaḥ* (l. 7). The *sandhi* is neglected after *-yaśāḥ* (l. 5), *=smābhiḥ* (l. 9), °*vṛiddhayē* (l. 11), *-sīmāntikā* and *valmīkaḥ* (l. 16), and wrongly made in *-vāpyā* (l. 15) and *tatō* (l. 18).

The inscription records the grant of a piece of land at the village of **Hoṇḍevaka** in **Kṛishṇ uka-vartanī** (l. 8) as an *agrahāra* to Jayaśarman, a resident of **Urāmalla** (l. 12). This land had been purchased from the residents of the *agrahāra* (of Hoṇḍevaka) by the grantor—the Mahārāja **Hastivarman** (l. 8) of **Kaliṅga** (l. 4), who belonged to the **Gāṅga** family (l. 5 f.) and resided at **Kaliṅganagara** (l. 1). This king receives exactly the same panegyrical epithets as are applied to Indravarman I at the beginning of his two published grants.[2] The date of Hastivarman's grant was **the year 80** (in words and figures) **of the reign** (l. 23), while Indravarman's grants are dated in the years 87 and 91 of the reign. For this reason, and because all the three grants were drafted by the same officer, Hastivarman must have been the predecessor of Indravarman I, and the 'years of the reign' cannot possibly have been those of two individual reigns, but must be referred to the Gāṅga or Gāṅgēya era, whose earliest known date is now that of Hastivarman's record. The day of the grant was '**the eighth (tithi) of the dark (fortnight) of Kārttika**' (all in words, l. 13) or '**the day 8 of Kārttika**' (l. 23).

The officer who wrote the grant of Hastivarman and the two grants of Indravarman I, was Vinayachandra, son of Bhānuchandra. In the verse which contains his name,[3] he calls his sovereign **Rājasiṁha**, which, accordingly, must have been a *biruda* both of Hastivarman and of his successor Indravarman I. According to verse 5, Hastivarman had the additional surname **Raṇabhīta**. The same curious expression, which at first sight does not look very complimentary, but may have to be understood in a moral sense, occurs in two copper-plate grants as the name of a member of the dynasty of Śailōdbhava; see verse 6 of the Buguḍa plates, above, Vol. III, p. 43, and of the Pārikud plates, Vol. XI, p. 284.

The subjoined grant does not mention the name of its engraver; but I use this opportunity for again drawing attention to an error which dies hard, and crops up once more in the transla-

[1] Above, Vol. III, p. 127 ff.

[2] See the preceding note, and the Parlā-Kimeḍi plates, *Ind. Ant.*, Vol. XVI, p 134.

[3] Verse 4 of the subjoined grant is identical with line 23 f. of the Achyutapuram plates, and with line 19 f. of the Parlā-Kimeḍi plates, of Indravarman I.

tion of a Gāṅga grant in Vol. XIII, p. 216. As I have shown in Vol. VII, p. 107, note 4, *akhaśāli*, the person to whom the engraving of copper-plate grants is entrusted, means 'a goldsmith,'[1] and must not be confounded with *akshapaṭalika*, 'a keeper of records.'

Of the localities mentioned in this inscription, **Kaliṅganagara** (l. 1) is the present Mukhaliṅgam,[2] and **Urāmalla**, where the donee resided (l. 12), is Urlām[3] where the copper-plates were obtained. In the absence of local maps, I am unable to identify the village granted, **Hoṇḍevaka** (l. 8), and another village, **Hattaravanna**, which seems to be referred to in the description of the boundaries of the former (l. 16). The district of **Krōshṭuka-vartanī** (l. 8) occurs also in the Chicacole plates of Dēvēndravarman.[4]

TEXT.[5]

First Plate ; Second Side.

1 ओं[6] स्वस्ति [।*] सर्व्वर्त्तुसुखरमणीयाद्विजयकलिङ्गनगरात्सकलभुवननिर्म्माणैक-

2 सूत्रधारस्य भगवतो [7]गोकर्ण्णस्वामिनश्चरणकमलयुगलप्रणामादपगत-

3 कलिकलङ्को विनयनयसम्पदामाधारः स्वासिधारापरिस्पन्दाधिग-

4 तसकलकलिङ्गाधिराज्यश्चतुरुदधितरङ्गमेखलावनितलप्रवि-

5 ततामलयशा(ः) अनेकसमरसंक्षोभजनितजयशब्दो[8] गाङ्गा-

6 मलकुलप्रतिष्ठः प्रतापातिशयानामितसमस्तसामन्तचूडा-

Second Plate ; First Side.

7 मणिप्रभामञ्जरीपुञ्जरञ्जितचरणो मातापितृपादानुध्यातः परम-

8 माहेश्वरः श्रीमहाराजो हस्तिवर्म्मा (।) क्रोष्टुकवर्त्तन्यां होण्डेवकग्रामे स-

9 र्व्वसमवेतान्कुटुम्बिनस्समाज्ञापयति [।*] विदितमस्तु वो यथास्माभि[ः][9]

10 अस्मिन्ग्रामेग्रहारिकसकाशात्क्रीत्वा हार्द्दहलस्य भूम्खण्डोक्षत्याचन्द्रार्क्क-

11 प्रतिष्ठमग्रहारङ्कृत्वा सर्व्वकरैः परिहृत्य मातापित्रोरात्मनश्च पुण्याभिवृद्धये[10]

12 उरामल्लनिवासिने वत्ससगोत्राय वाजसनेयसब्रह्मचारिणे ज[य]-

Second Plate ; Second Side.

13 शर्म्मणे कार्त्तिककृष्णाष्टम्यामुदकपूर्व्वं संप्रत्ता [।*] तद्विदित्वा स्वभूमिमनुपाल-

14 यतां न केनचित्परिवाधा[11] कार्य्येति । सीमाचिह्नानि चात्र [।*]
पूर्व्वेण वल्मीकस्ततः

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[1] Cf. '*agasāli, agasālavāḍu* or *agasālevāḍu*, a goldsmith,' in Brown's *Telugu-English Dictionary*.

[2] See above, Vol. IV, p. 187 ff.

[3] This identification was suggested in the Madras Epigraphical Report for 1920, p. 96.

[4] Above, Vol. III, p. 131.

[5] From ink-impressions supplied by Rao Bahadur H. Krishna Sastri.

[6] Expressed by a symbol.

[7] Read गोकर्ण्ण°.

[8] Read °संक्षोभ°.

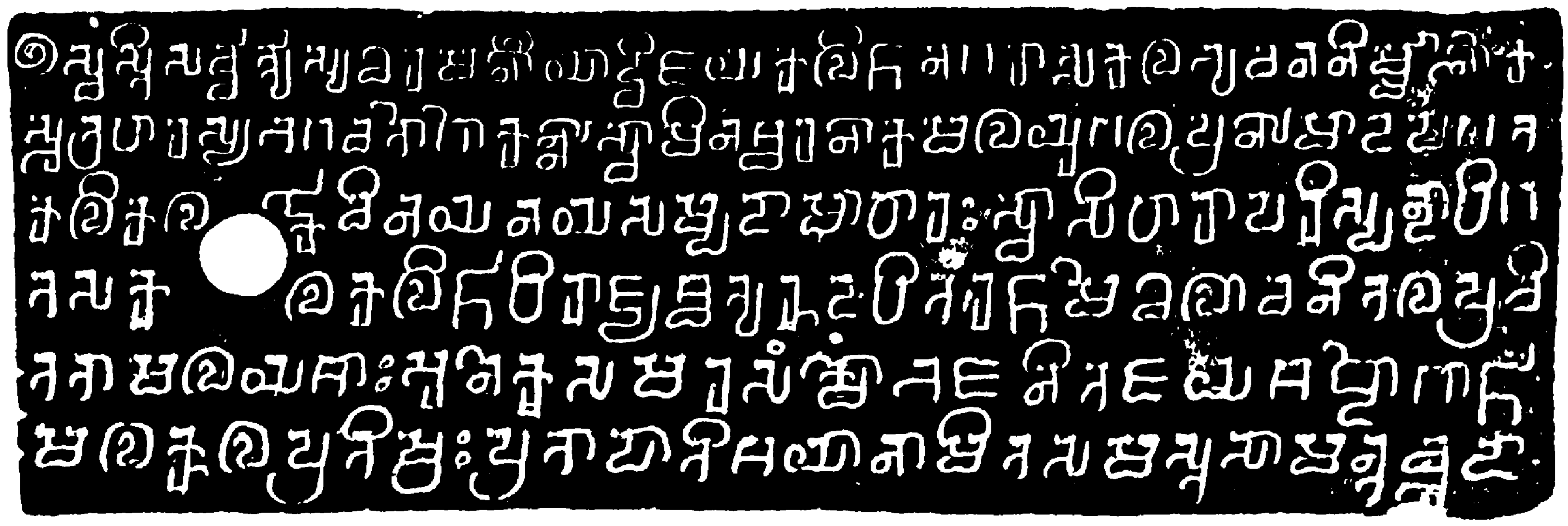
[9] Read यथास्माभिरस्मि[न्].

[10] Read °वृद्धये.

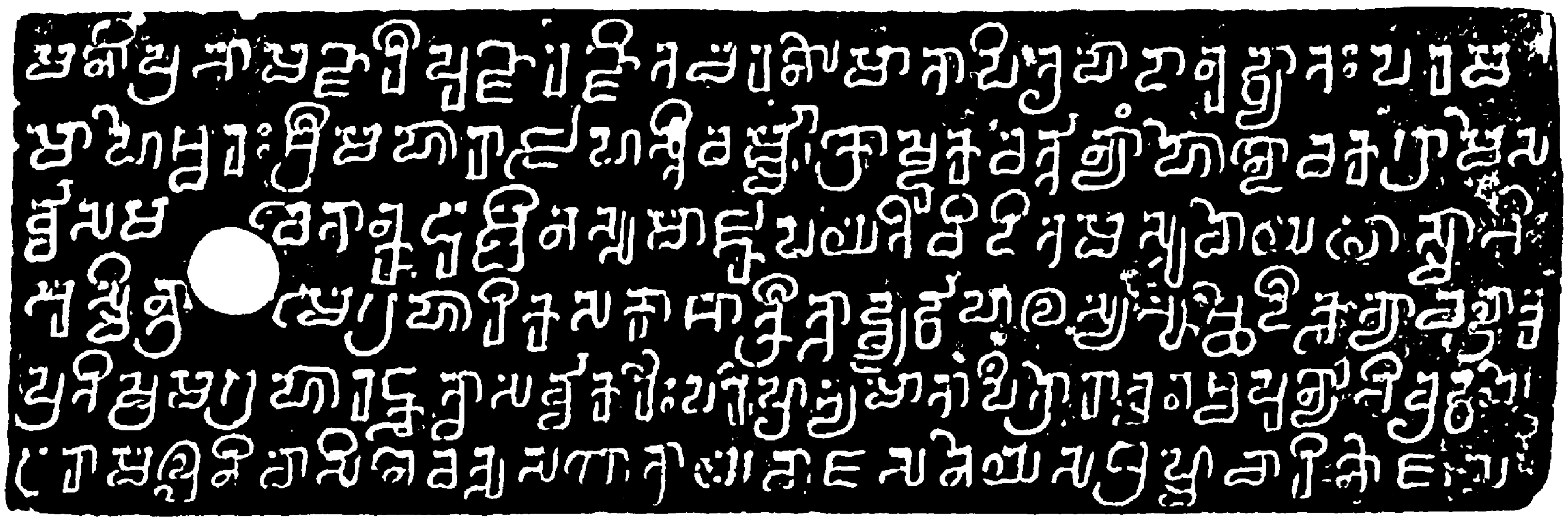
[11] Read °बाधा.

Urlam Plates of Hastivarman: the year 80.

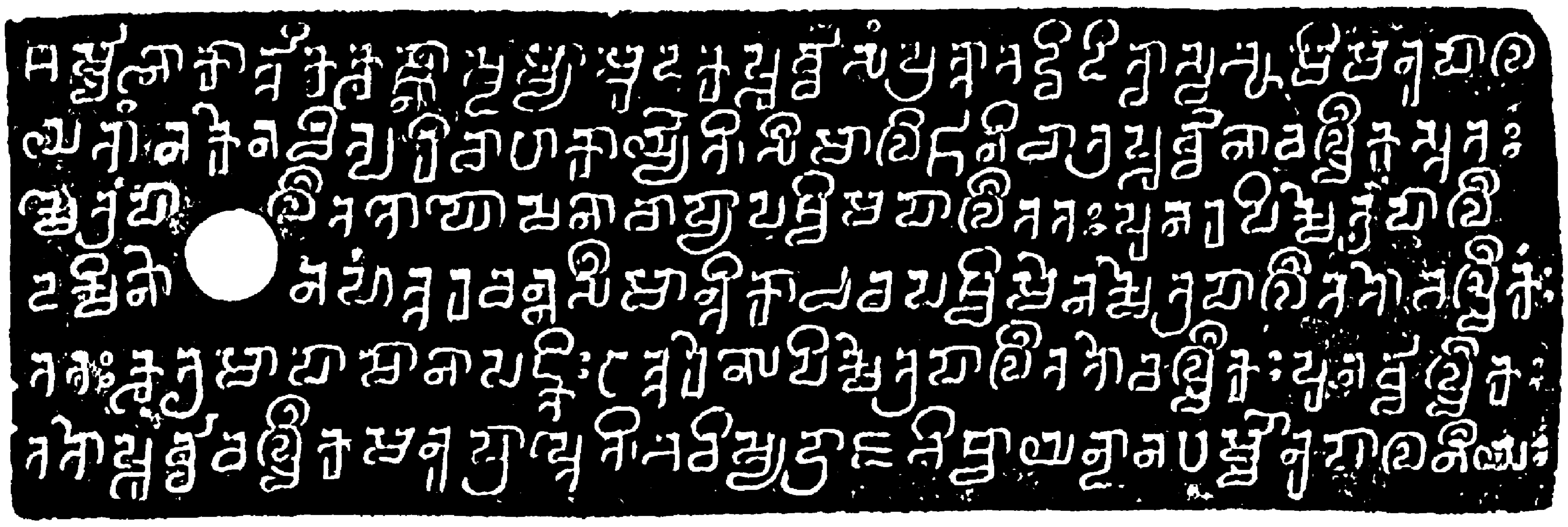
i.



ii a.

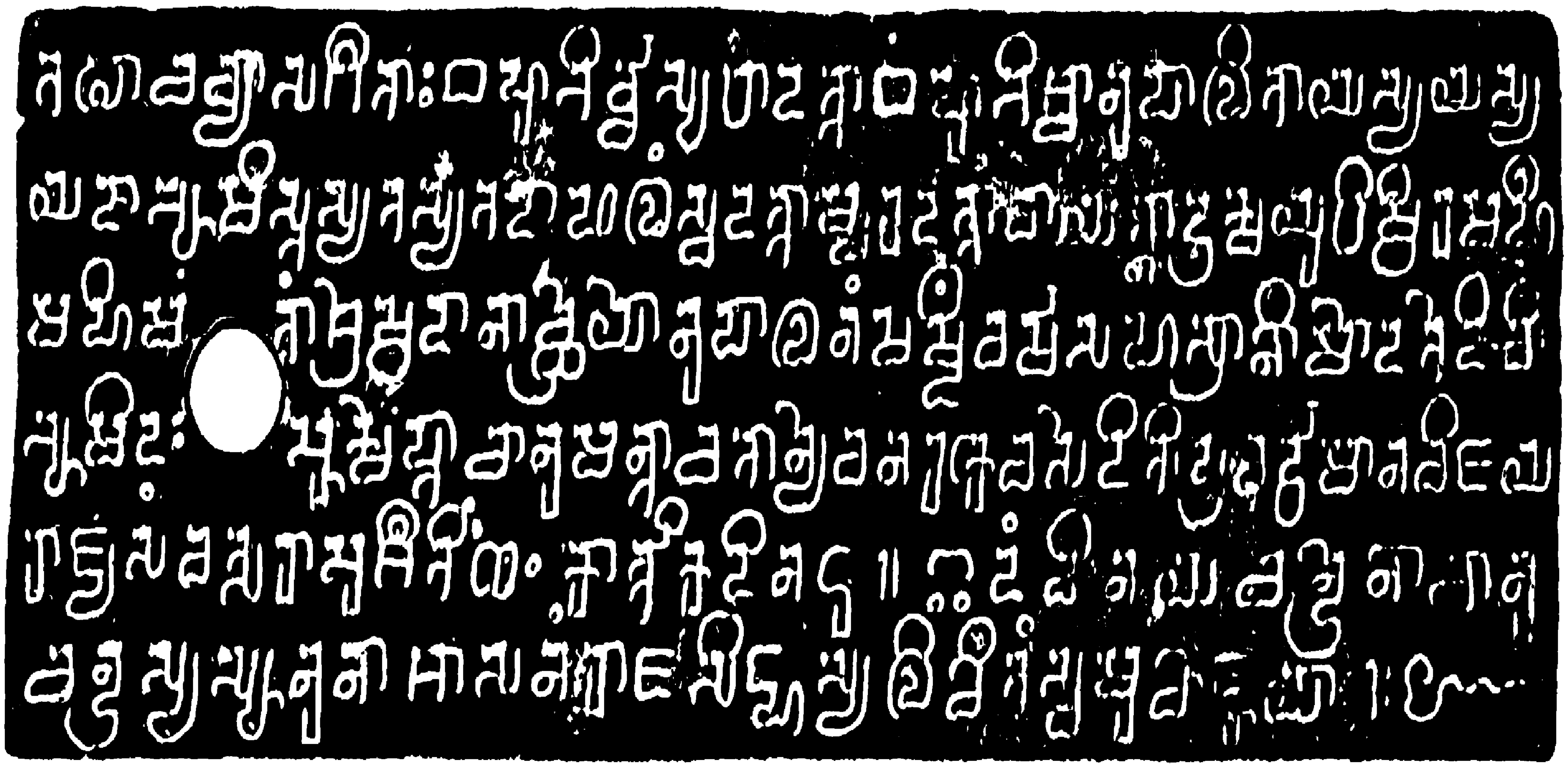


ii b.

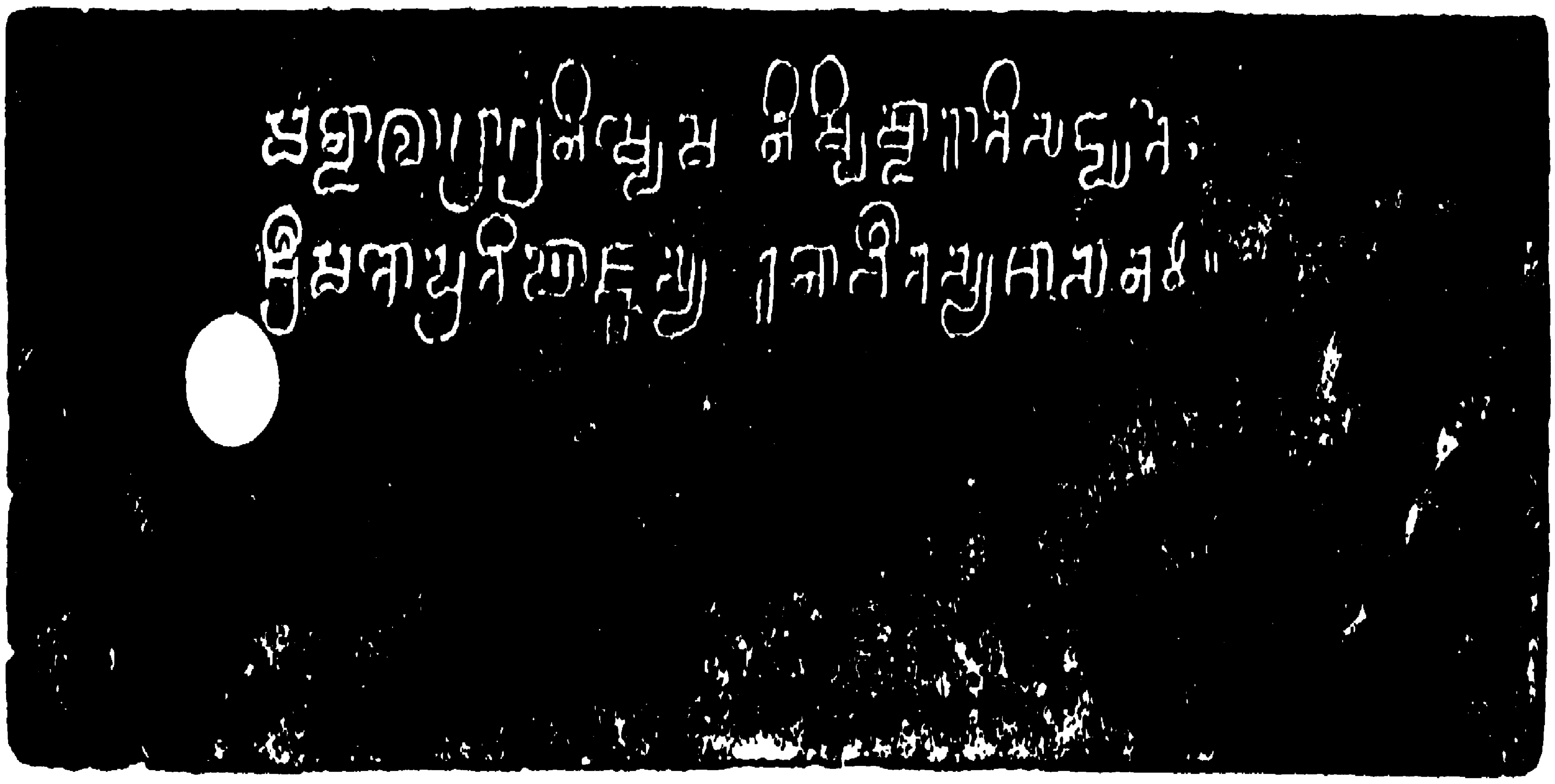


H. KRISHNA SASTRI. SCALE THREE-FOURTHS WHITTINGHAM & GRIGGS, PHOTO-LITH.

iii a.



iii b.



15 क्षेत्रपाली ततो घोषणवाप्या[:*] पश्चिमपाली ततः पुनरपि क्षेत्र-
पाली [।*]
16 दक्षिणेन हस्तरवनसीमान्तिका एव[1] [।*] पश्चिमेन क्षेत्रपाली ततो
वल्मीकः[2]
17 ततः क्षतृमा[3] पाषाणपङ्क्तिः [।*] उत्तरेणापि क्षेत्रपाली ततो वल्मीकः
पुनर्व्वल्मीकः[2]
18 ततो[4] पूर्व्ववल्मीकमनुप्राप्तेति । भविष्यद्राजभिश्चायन्दानधर्म्मोनुपालनीयः [।*]

Third Plate; First Side.

19 तथा च व्यासगीताः [।*] बहुभिर्व्वसुधा दत्ता बहुभिश्चानुपालिता [।*]
यस्य यस्य
20 यदा भूमिस्तस्य तस्य तदा फलं [॥ १*] स्वदत्ताम्परदत्तां वा यत्नाद्रक्ष
युधिष्ठिर [।*] मही[5]
21 महिमतां श्रेष्ठ दानाच्छ्रेयोनुपालनं [॥ २*] षष्टिं वर्षसहस्राणि मोदते दिवि
22 भूमिदः [।*] आच्छेत्ता चानुमन्ता च तान्येव नरके वसेदिति । [३*]
प्रवर्द्धमानविजय-
23 राज्यसंवत्सरा अशीतिः ८० कार्त्तिकदिन ८ ॥ इदं विनयचन्द्रेण भानु-
24 चन्द्रस्य सूनुना [।*] शासनं राजसिंहस्य[6] लिखितं स्वमुखाज्ञया ॥ [४*]

Third Plate; Second Side.

25 मण्डलाग्रामनिष्पेषनिष्पिष्टारातिसहतेः[7] [।*]
26 श्रीमतोप्रतिघाज्ञस्य रणभीतस्य शासनम् ॥

TRANSLATION.

(Line 1.) Ȯṁ. Hail! From Kaliṅganagara, (the city) of victory, which is pleasant (on account of the simultaneous presence) of the comforts of all seasons, the glorious Mahārāja Hastivarman, a fervent worshipper of Mahēśvara, who meditates on the feet of (his) mother and father, ...[8] commands (as follows) the ryots, accompanied by all (others), at the village of Hoṇḍevaka in (the district of) Krōshṭuka-vartanī.

(L. 9.) 'Be it known to you that We have purchased two and a half ploughs (*hala*) of land in this village from the *Agrahārikas*,[9] have constituted (this land a separate) section.

[1] Read सीमान्तिकैव.
[2] Read वल्मीकस्ततः.
[3] Read क्षतिमा.
[4] Read कस्ततः.
[5] Read महीं.
[6] Read सिंहस्य.
[7] Read °संहतेः.
[8] The epithets omitted here will be found translated above, Vol. III, p. 120.
[9] i.e. the residents of the *agrahāra*.

have made (it) an *agrahāra* which is to last as long as the moon and the sun, have exempted (it) from all taxes, and that, for the sake of the increase of the religious merit of (Our) mother and father and of Ourself, on the eighth (tithi) of the dark (fortnight) of **Kārttika**, with libations of water, We have given it to **Jayaśarman**, who resides at **Urāmalla**, belongs to the Vatsa *gōtra*, (and) studies the Vājasanēya (*śākhā*). Knowing this, nobody should cause obstruction to (the new owners) while they are preserving their own land.'[1]

(L. 14.) And the marks of the boundaries of this (land are): In the east, an anthill; then the bank (*pāli*) of a field; then the western bank of the *Ghōshaṇa* tank; and then again the bank of a field. In the south, only the boundary of **Hattaravanna**. In the west, the bank of a field; then an anthill; then an artificial row of stones. And in the north, the bank of a field; then an anthill; again an anthill; then (the boundary) reaches the anthill in the east.

(L. 18.) And future kings should preserve this meritorious gift. There are also the following (verses) sung by **Vyāsa**.

[Lines 19-22 contain three of the customary Ślōkas.]

(L. 22.) Eighty—(in figures) 80—years of the reign of increasing victory, the day 8 of **Kārttika**.

(Verse 4.) At the command of his (the king's) own mouth, this edict of **Rājasiṁha** has been written by Vinayachandra, son of Bhānuchandra.

(V. 5.) (This is) an edict of the glorious **Raṇabhīta**, whose orders are irresistible, (and) who has crushed the collection of (his) enemies by the strokes of the point of (his) scimitar.

No. 20.—IPUR PLATES OF GOVINDAVARMAN'S SON MADHAVAVARMAN.

BY PROFESSOR E. HULTZSCH, PH.D., HALLE (SAALE).

This is a set of three thin **copper-plates** in the possession of **Brindavanam Gopalacharlu** at the village of **Īpūr** in the **Tenāli Tāluk** of the **Guṇṭūr District**, which was brought to the notice of Rao Bahadur H. Krishna Sastri by Mr. A. Rangasvami Sarasvati. The plates measure 6¾ inches in breadth and 1¾ inches in height. The outer faces of the first and last plates have been left blank, while the middle one bears writing on both sides. The margins of the plates are not raised into rims, but the writing is in good preservation. The plates are strung on a copper ring, which is 3" in diameter and is passed through a hole on the left side of the writing. The two ends of the ring are secured in the base of a circular seal, which measures 1½" in diameter and is somewhat worn. It is divided by a cross-line into two sections. The lower section bears, in relief, the legend श्रीमाधववर्म्म in two lines. Above the line seems to be a figure of Lakshmī or a Svastika on a pedestal, flanked by two lamp-stands and surmounted by the sun (?) and the crescent of the moon. The weight of the plates, with ring and seal, is 30 tolas.

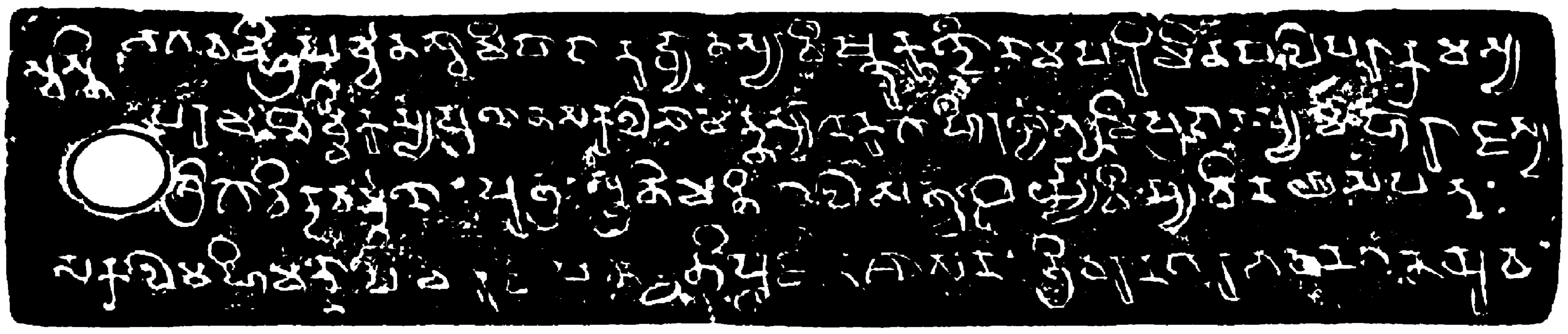
The alphabet is of an earlier southern type than that of the two other published grants of the Vishṇukuṇḍin family[2]. The secondary forms of *i* and *ī* are not always clearly distin-

[1] Cf. the corresponding portion of the Achyutapuram plates, above, Vol. III, p. 129.

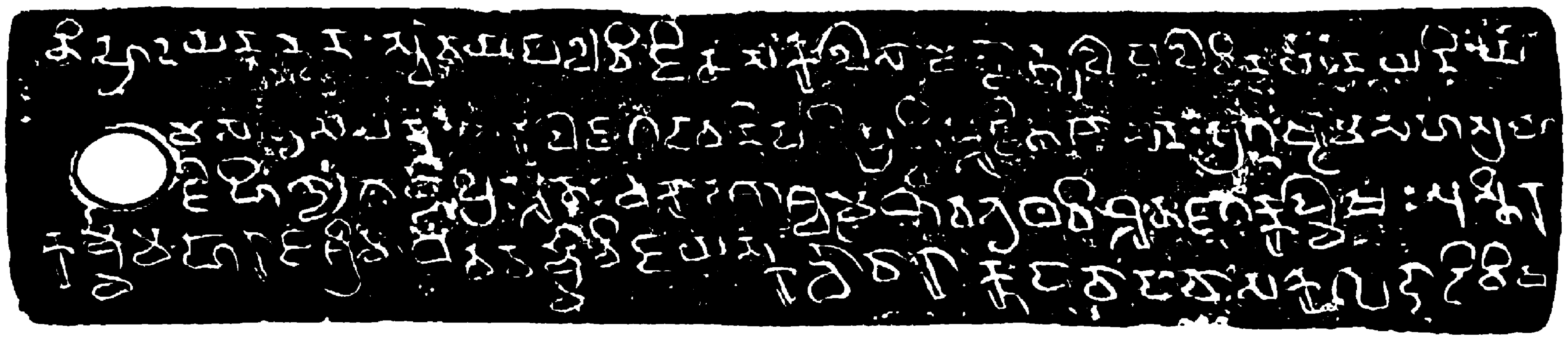
[2] These are the Rāmatīrtham plates of Indravarman, above, Vol. XII, p. 133, and the Chikkulla plate of Vikramēndravarman II, Vol. IV, p. 193.

Ipur Plates of Govindavarman's Son Madhavavarman.

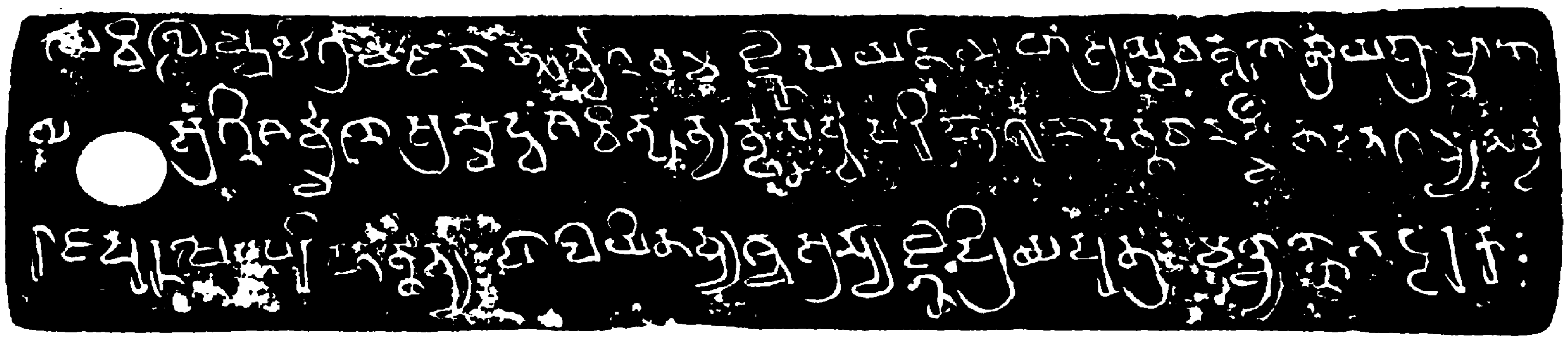
i.



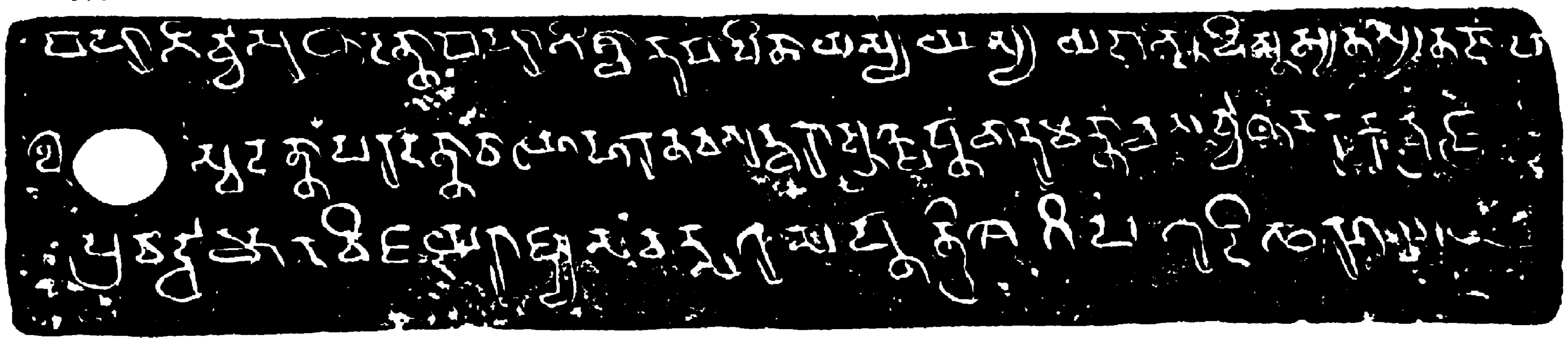
ii a.



ii b.

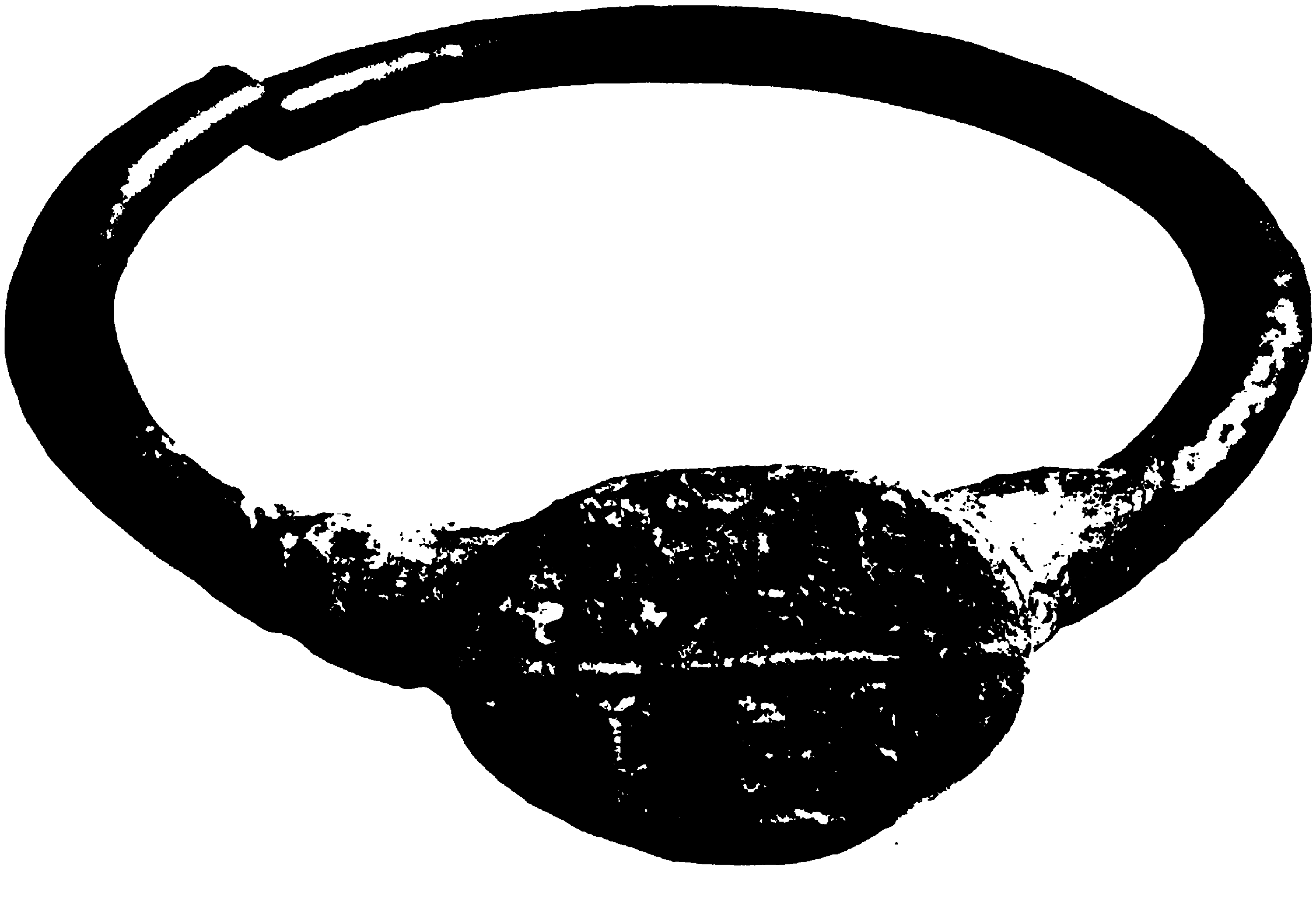


iii.



H. KRISHNA SASTRI. SCALE THREE-FOURTHS WHITTINGHAM & GRIGGS, PHOTO-LITH.

Seal



FULL SIZE

guished; in °*kuṇḍinām*= (l. 1) *i* looks like *ī*, and in *bhagavaoh-Chhrīparvvata-* (l. 1), *śrī-Gōvinda*° (l. 3), and *-mahī-* (l. 4), *ī* looks like *i*; *t* is distinguished from *n* by a loop on the left: but in *-janīn=* (l. 9) the second *n* has a loop, and in *-jagat-kalmashaḥ* (l. 7) and *-saṁvatsarē* (l. 14) the *t* has no loop. Final forms of *m* and *t* occur in *-artthaṁ* (l. 10), *vasundharām* and *vrajēt* (l. 13). The **numerical symbols** 5, 7, and 10 are used in the date (l. 14).

The **language is Sanskrit** prose (with two verses quoted in l. 12 f.), but the abbreviation *gi* (l. 14) presupposes the **Prākṛit** word *gimha* (= *grīshma* in Sanskrit) The incorrect form *saptātrisē*, (for *saptatriṁśē*, l. 14) seems also to be due to Prākṛit influence. Palatal *ñ* is expressed by lingual *ṇ* in *Maṇchyaṇṇa-* (l. 11). Consonants are doubled after *r* throughout, and *dh* before *y* in *-ānuddhyātasya* (l. 1), while *tva* represents *ttva* in *-satva-* (ll. 3, 6). As the notes on the text will show, the rules of *sandhi* are frequently disregarded.

The inscription records the grant of the village of **Vilembali** in the **Guddādi-vishaya** (l. 8 f.) to the Brāhmaṇa **Agniśarman**. The grantor was the Mahārāja **Mādhavavarman** (l. 8), son of the Mahārāja **Gōvindavarman** (l. 3), who was a worshipper of the temple at **Śrīparvata** and belonged to the family of the **Vishṇukuṇḍins** (l. 1). Mādhavavarman issued his order to the villagers from his camp at **Kuḍāvāḍa** (l. 8) and seems to have resided at **Trivaranagara** (l. 4). The executor (*ājñā*) of the grant was (the king's) 'dear son,' **Mañchyaṇṇa-bhaṭṭāraka** (l. 11). **Its date was the 15th day of the 7th fortnight of the hot season in the thirty-seventh year of the reign** (l. 14).

In consideration of the comparatively early type of the alphabet of this inscription, I feel tempted to identify Mādhavavarman with a king of the same name, who is known to have been the grandfather of the grantor of the Rāmatīrtham plates, and the great-grandfather of the grantor of the Chikkulla plates.[1] For easy reference, I subjoin a tabular statement.

Īpūr plates.	*Rāmatīrtham plates.*	*Chikkulla plates.*
Gōvindavarman.		
Mādhavavarman (year 37).	Mādhavavarman.	Mādhavavarman.
	Vikramēndra.	Vikramēndravarman I.
	Indravarman (year 27).	Indrabhaṭṭārakavarman.
		Vikramēndravarman II (year 10).

Of the **localities** mentioned in this inscription, **Śrīparvata** (l. 1) is perhaps identical with Śrīśailam in the Karnūl District.[2] Whether the **Guddādi-vishaya** (l. 8 f.) has anything to do with the Guddavādi-vishaya to which Drākshārāma and Chellūr in the Gōdāvarī District belonged,[3] I am unable to say, nor can I identify Vilembali (l. 9), Kuḍāvāḍa (l. 8), and Trivaranagara (l. 4), which can hardly be identical with the distant Tripurī (Tewar).

[1] See my remarks above, Vol. XII, p. 133, and cf. the Madras Epigraphical Report for 1920, p. 98.
[2] See above, Vol. IV, p. 195.
[3] See above, Vol. IV, p. 83; *Ind. Ant.*, Vol. XIV, p. 52, text l. 77; Vol. XIX, p. 424.

TEXT.[1]

First Plate ; Second Side.

1 स्वस्ति [।*] भगवच्छ्रीपर्व्वतस्वामिपादानुध्यातस्य विष्णुकुण्डिनामपरिमितबल-
पराक्रमस्य

2 परमधार्म्मिकस्य प्रणतसकलसामन्तस्यानेकगोहिरण्यभूमिप्रदानस्य महाराजस्य

3 श्रीगोविन्दवर्म्मण: पुत्र: स्मृतिमतिबलसत्वधैर्य्यवीर्य्यविनयसंपन्न:[2]

4 सकलमहीमण्ड[ल]म[नु]जपति[प्र]तिपूजितशासन:[3] त्रिवरनगरभवनगतयुव-

Second Plate ; First Side.

5 तिहृदयनन्दन: [4]स्व[न]यबलंविजितसकलसामन्तातुलबलविनयनयनिय-

6 मसत्वसपन्न:[5] सकलजगदवनिपतिप्रतिपूजितशासन:[6] अग्निष्टोमसहस्रया-

7 जी हि[र*]ण्यगर्ब्भप्रसूत:[7] एकादशाश्वमेधावभृथविधूतजगत्कल्मष: सुस्तिर-[8]

8 कर्म्म[ा] महाराजश्रीमाधववर्म्मा विजयस्कन्धावारा[त्*] कुडावाडवासक-[9]
गुहादिविष-

Second Plate ; Second Side.

9 ये विलिम्बलिग्रामजनान्सर्व्वानेवम[ा*]ज्ञापयति यथा[10] अस्मै वत्सगोत्राय
ब्राह्मणा-

10 य[11] अग्निशर्म्मणे अस्मद्वंशविभूत्यर्थम्[12] सर्व्वपरिहारेण दत्तवानस्मि [।*]
तदवगम्य सर्व्व-

11 राजपुरुषै: परिहर्त्तव्य: पालयितव्यश्च [।*] अस्याज्ञा प्रियपुत्र:[13] मण्ड्यण्ण-
भट्टारक: [।*]

Third Plate ; First Side.

12 बहुभिर्व्वसुधा दत्ता बहुभिश्चानुपालिता [।*] यस्य यस्य यदा भूमिस्तस्य तस्य
तदा फ-

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[1] From ink-impressions supplied by Rao Bahadur H. Krishna Sastri.

[2] Read °सत्त्व°.

[3] Read °शासनस्त्रिवर°.

[4] Perhaps स्वभुजबल° is intended. Read °सामन्तोऽतुल°.

[5] Read °सत्त्वसंपन्न:.

[6] Read °शासनोऽग्नि°.

[7] Read °प्रसूतिरेकादशा°

[8] Read सुस्थिर°.

[9] Read °वासकाद्गुहादि°.

[10] Read यथास्मै.

[11] Read ब्राह्मणायाग्निशर्म्मणेऽस्म°.

[12] Read °त्यर्थं.

[13] Read °पुत्रो मण्ड्यण्ण°.

13 ल[म् ॥*] स्वदत्तां परदत्तां वा यो हरेत वसुन्धराम् [।*] प्राच्चेता चानुमन्ता च सर्व्वथा नरक[1] व्रजेत् [॥*]

14 प्रवर्द्धमानविजयराज्यसंवत्सरे सप्तात्रिंशे[2] गि प ७ दि १० ५ ॥

TRANSLATION.

(Line 1.) Hail! The son of the glorious Mahārāja **Gōvindavarman,** who meditated on the feet of the holy lord of **Śrīparvata**; (who belonged to the family) of the **Vishṇukuṇḍins**; whose power and valour were immeasurable; who was most religious; to whom all vassals were bowing; (and) who (performed) many gifts of cows, gold, and land;

(L. 3.) the glorious Mahārāja **Mādhavavarman,** who is endowed with (knowledge of) the law, intelligence, power, honesty, firmness, valour, and modesty; whose edicts are worshipped by all rulers of men on the circle of the earth; who delights the hearts of the young women standing on (the top of) the palaces of **Trivaranagara**; who has subdued all vassals by the power of his own arm; who is endowed with unequalled power, modesty, policy, self-restraint, and honesty; whose edicts are worshipped by the rulers of the earth in the whole world[3]; who has performed thousands of *Agnishṭōma* sacrifices; who is a producer of (i.e. who has performed *Hiraṇyagarbhas*[4]; who has removed the stains of the world by bathing at the end of eleven *Aśvamēdhas*[5]; (and) whose religious rites are everlasting;

(L. 8.) from (his) camp of victory, pitched at **Kuḍāvāḍa,** commands as follows all men at the village of **Vilembali** in the district (*vishaya*) of **Guddādi.**

(L. 9.) 'For the sake of the prosperity of Our family, I have given (this village), with all exemptions, to this[6] Brāhmaṇa Agniśarman of the Vatsa *gōtra*. Knowing this, all royal officers should exempt and preserve it.'

(L. 11.) The executor (*ājñā*) of this (grant was the king's) dear son, **Mañchyaṇṇa-bhaṭṭāraka.**

[Line 12 f. contain two of the customary Ślōkas.]

(L. 14.) **In the thirty-seventh year of the reign** of increasing victory, **the 15th day of the 7th fortnight of the hot season.**[7]

No. 21.—IPUR PLATES OF MADHAVAVARMAN II.

BY PROFESSOR E. HULTZSCH, PH.D.; HALLE (SAALE).

This is another set of **three** thin **copper-plates** without rims, which belongs to the same owner as the preceding one (above, No. 20). The plates measure 7 inches in breadth and 1¼ inch in height and have four inscribed faces, the outer sides of the first and last plates having been left blank. The writing is much injured, especially on the two last faces. The plates are strung on a **ring,** which is about 3" in diameter, and the ends of which are secured in the base of

---

[1] Read नरकं. [2] Read सप्तत्रिंशे.

[3] The two last epithets are nearly identical with two others applied to the king before in line 3 f.

[4] *Hiraṇyagarbha* is the name of the fifth of the sixteen *Mahādānas*. Cf. *anēka-Hiraṇyagarbbh-ōdbhav-ōdbhavasya* in the Maṭṭepāḍ plates of Dāmōdaravarman (above, No. 18), text l. 2 f., and *apramēya-Hiraṇyagarbha-prasavēna* in the Gōraṇṭla plates of Attivarman *Ind. Ant.*, Vol. IX, p. 102, text l. 3.

[5] The same epithet occurs (with the various reading *avadhauta* for *vidhūta*) in the Rāmatīrtham plates, l. 3 f., and in the Chikkulla plates, l. 2 f.

[6] Cf. above, Vol. IX, p. 59, note 6.

[7] With *gi pa 7* cf. *gimhā pakho chhaṭho 6* in the Mayidavōlu plates (above, Vol. VI, p. 88); [*g*]*imha-pakhe pachame 5* at Kārlē (Vol. VII, p. 61); the following dates of four Nāsik inscriptions (above, Vol. VIII): *gimha-pakhe pachame 5* (p. 59); *gimhāṇa pakhe bitiye 2* (p. 60); *gi pa 2* (p. 65); . . *mha-pakhe chothe 4* (p. 88) and *gihma-pakkaṁ paḍamaṁ* in a Maḷavaḷḷi inscription (Vol. X, Appendix, p. 138, No. 1195).

a circular, much worn **seal**, which is turned towards one side. The seal is divided by a cross-line into two sections. In the lower section the legend श्रीमाधव[वर्म्म], in two lines, is very faintly visible, while the symbols in the upper section cannot be made out. The weight of the plates, with ring and seal, is 30 tolas.

The **alphabet** reminds us of that of the British Museum plates of Chārudēvī (above, Vol. VIII, p. 143). The *Upadhmānīya* occurs in lines 12 and 16. The **numerical symbols** 7 (thrice) and [40] are used in the date (l. 13).

The **language** is **Sanskrit** prose (with two verses quoted in ll. 14-16); but the abbreviation *vā* (l. 13) presupposes the **Prākṛit** form *vāsa* (=*varsha* in Sanskrit). Consonants are doubled after *r* throughout, *t* before *r* in *kshattriyā°* (l. 3 f.) and *-puttras-* (l. 5), and *dh* before *y* in *°ddhyātō* (l. 7),[1] while *tva* is employed for *ttva* in *-satva-* (l. 6).

The inscription records the grant of a village, the name of which is doubtful, by **Mādhavavarman (II)** (l. 7), who resided at **[Ama]rapura** (l. 1), ruled over the **Trikūṭa** and **Malaya** mountains (l. 5), was a worshipper of the temple at **Śrīparvata** (l. 6 f.), and belonged to the family of the **Vishṇukuṇḍins** (ll. 7, 13). His father was **Dēvavarman** (l. 5), and his grandfather the Mahārāja **Mādhavavarman (I)** (l. 3 f.). As the alphabet of this inscription seems to be of an earlier type than that of the preceding one, and as grandsons are frequently named after their grandfather, I consider it not impossible that Mādhavavarman II was the grandfather of Gōvindavarman's son Mādhavavarman,[2] who would then have to be designated Mādhavavarman III. The first figure of the year in the date portion of the subjoined inscription (l. 13) is injured and uncertain.

The **localities** mentioned in this inscription I am unable to identify, with the exception of **Trikūṭa**, a mountain on the Bombay side,[3] and **Malaya**, i.e. the Western Ghāṭs, both of which were at a safe distance from the dominions of Mādhavavarman II, although he professes to have ruled over them. For **Śrīparvata**=Śrīśailam see above, Vol. IV, p. 195.

TEXT.[4]

First Plate ; Second Side.

1 स्वस्ति [।*] [अम]रपुरादेकादशाश्वमेधावभृथावधूतजगत्कल्म[ष]-

2 स्याग्निष्टोमसहस्रयाजिनोनेकसामन्तमकुटकूटम-

3 णिखचितचरणयुगलकमलस्य[5] महाराजस्य श्रीमा-

4 धववर्म्मण: प्रियनप्ता क्षत्रियावस्कन्दप्र[वर्त्ति]ताप्रतिमवि-

Second Plate ; First Side.

5 [ख्या]तपराक्रमस्य श्रीदेववर्म्मण: प्रियपुत्रस्त्रिकूटमलयाधिपति-

6 र्न्नयविनयसत्वसंपन्नो[6] भगवच्छ्रीपर्व्वतस्वामिपादानु-

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[1] But not in *-svādhyāya-* (l. 8) and *-dhyānō°* (l. 13).

[2] See above, No. 20.

[3] See above, Vol. XI, p. 220, and cf. Vol. IX, p. 269.

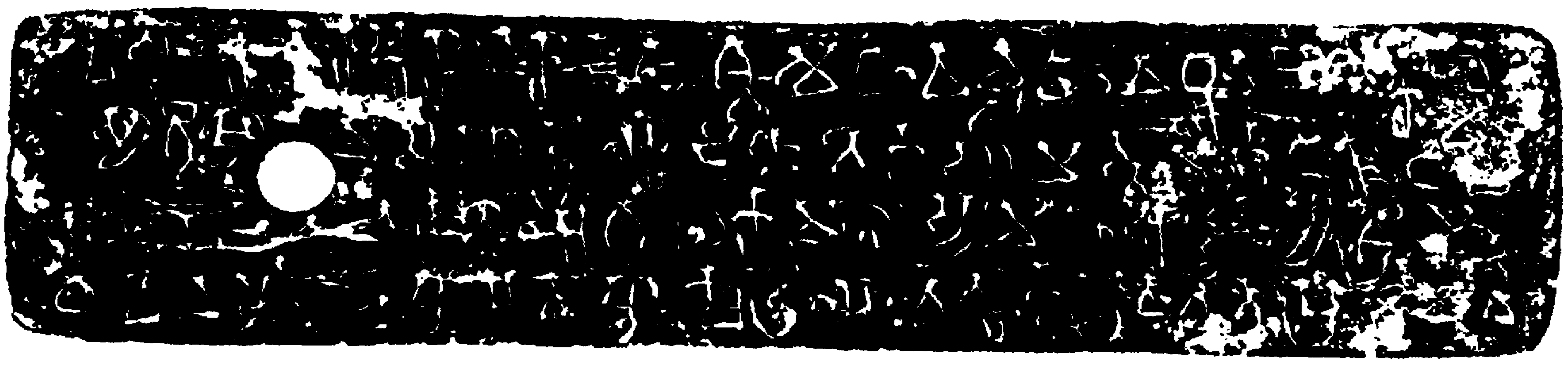
[4] From ink-impressions supplied by Rao Bahadur H. Krishna Sastri.

[5] Read °चरणकमलयुगलस्य.

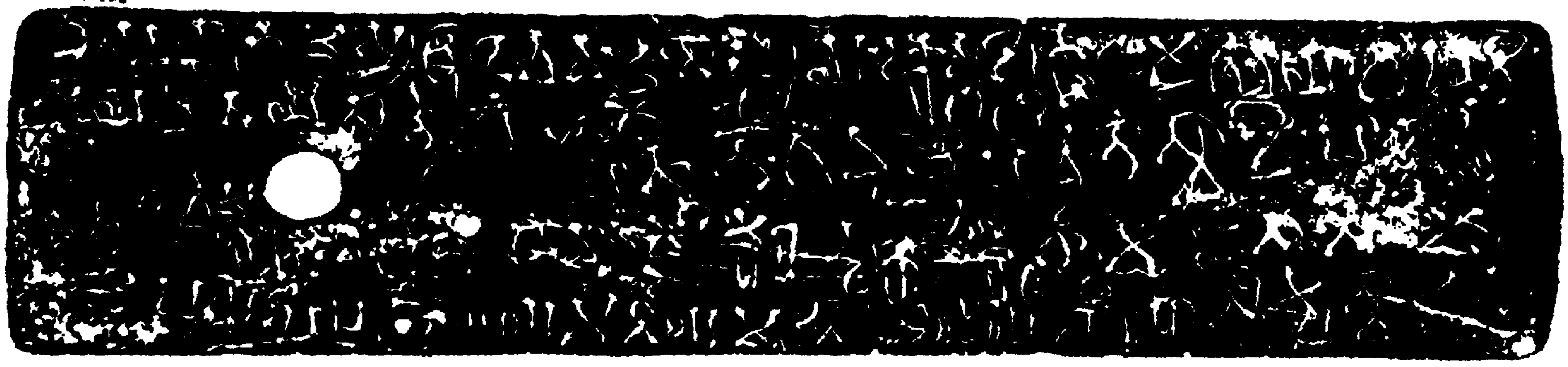
[6] Read °सत्त्व°.

Ipur Plates of Madhavavarman II.

i.



ii a.



ii b.



iii.



H. KRISHNA SASTRI. SCALE THREE-FOURTHS WHITTINGHAM & GRIGGS, PHOTO-LITH.

Seal



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7 ज्ञातो विष्णु — —[1] श्री[मा]ध[वव]र्म्मा सुरो-क-ग्रामे जनाने[व]मा-

8 ज्ञापयति यथा ॥ यमनियमस्वाध्यायक्रियासम्पन्नाभ्या-

Second Plate ; Second Side.

9 . . . . अग्निशर्म्मेन्द्र[शर्म्म]भ्य[ा]-

10 मा . . . . . : . . . . . [कक्कि]क-

11 ग्राम . . . .

12 — — ग्रामपदेᳵपरिहर्त्तव्य[:*] [प]रिहार[यितव्यश्च] [।*] अस्य [शास]-

Third Plate ; First Side.

13 [न]स्याज्ञा विष्णुकु[ण्ड्यधि]र[ा]ज[ध्यानोदात्ता] ॥ सं [४०] ७ वा प ७
दि ७ ओं[2] ॥

14 बहुभिर्व्वसुधा दत्ता बहुभिश्चानुपालिता [।*] यस्य यस्य यदा भूमि-

15 [स्तस्य] तस्य तदा फल[म् ॥ स्वदत्तां परदत्तां वा यो हरेत वसुन्धराम् ।]

16 [गवां] शतसहस्रस्य [हन्तु]ᳵपिबति किल्बिष[मिति ॥]

TRANSLATION.

(Line 1.) Hail! From [Ama]rapura, the dear grandson of the glorious Mahārāja **Mādhavavarman,** who had removed the stains of the world by bathing at the end of eleven *Aśvamēdhas* ; who had performed thousands of *Agnishṭōma* sacrifices[3] ; (and) whose pair of lotus-feet was studded with the jewels on the top of the diadems of many (bowing) vassals;

(L. 4.) the dear son of glorious **Dēvavarman**, who displayed matchless, well-known valour in attacking warriors;

(L. 5.) the glorious **Mādhavavarman**, the lord of the **Trikūṭa** and **Malaya** (mountains), who is endowed with policy, modesty, and honesty; who meditates on the feet of the holy lord of **Śrīparvata** ; (and who belongs to the family) of the **Vishṇu[kuṇḍins]**, commands as follows the men at the village of . . . . .

[Line 8 f. seems to refer to two donees, Agniśarman and Indraśarman.]

(L. 12.) The command (*ājñā*) of this edict[4] was ennobled by the meditation (?) of the overlord of the **Vishṇukuṇḍins.**

(L. 13.) **The year [4] 7, the 7th day of the 7th fortnight of the rainy season.**[5] *Ōṁ.*

[Lines 14-16 contain two of the customary Ślōkas.]

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1 Restore perhaps विष्णुकुण्डिना.

2 Expressed by a symbol.

3 These two epithets occur also in line 6 f. of the other Īpūr plates (above, No. 20).

4 Cf. *asya śāsanasy-ājñaptiḥ* ; *South-Ind. Inscr.*, Vol. I, p. 57, text l 113 f.

5 With *vā pa 7* cf. *vāsa* 6 in the Hirahaḍagalli plates (above, Vol. I, p. 7); *varsha-pakshē chaturtthē* (Vol. III, p. 262); *varshā-pakshaḥ ashṭamaḥ* (*Ind. Ant.*, Vol. VII, p. 37); *vāsā-pakham 8* in two inscriptions at Jaggayyapēṭa (ASSI., Vol. I, p. 110); *vā pa 4* at Kārlē (above, Vol. VII, p. 64); *vāsa pakhe* 2 and *vāsāna pakhe* 4 at Nāsik (Vol. VIII, pp. 71, 73.)

No. 22.—REVISED TEXT AND TRANSLATION OF TWO OF THE KURAM PLATES.

BY PROFESSOR E. HULTZSCH, PH.D., HALLE.

Some time after I had published the **Kūram** copper-plates of the **Pallava** king **Paramēśvaravarman I**,[1] the late Professor Kielhorn recognised that plates III and IV of that inscription in which I had noticed only two verses, are all in poetry. I now reprint the very corrupt text of this portion of the inscription (ll. 19-49), arranging it in verse lines, correcting the writer's mistakes, as far as I am able to do this, in notes, and adding a fresh translation. Rao Bahadur Krishna Sastri was good enough to contribute to this article a few additional conjectures, *viz.* °धनुषि, verse 12; युद्धभटे or रणभटे, v. 14: मगमद° , v. 15; कृतवान्, v. 21; खड्ग, v. 23.

The subjoined passage consists of 22 verses (5-26). The relative pronouns in verses 5, 6, 21, and 26 refer to the name of the donor *Paramēśvaravarmmā*, l. 19) at the end of the preceding prose passage. Verses 8-21 form one long relative sentence, describing the king's victory over the **Chalukya** king **Vikramāditya** I. Verses 22-26 praise Paramēśvaravarman's state-elephant Arivāraṇa, his charger Atiśaya, his dagger, and his girdle.

TEXT.[2]

महेन्द्रवर्म्मण: . . . . . पुत्र[:] . . . . . परमेश्वरवर्म्मा
भरत इव सर्व्वदमन[:*] सगर इव कृतासमञ्जसत्याग: [।*]
कर्ण्ण इव पुष्कलांगो य: प्रियक[र*]ण्यो ययातिरिव [॥ ५ ॥*]

(*a*) Metre of verses 5-9 : Āryā (30+27 *mātrās*).

अनुपनतानां राज्ञा (*a*) यस्याज्ञा भवति सर्व्वदापीळा (*b*) [।*]
सैव सुहृदाम्प्रयच्छति मुखशोभा (*c*) कर्ण्णपूरतया [॥ ६ ॥*]

(*a*) Read राज्ञां. (*b*) Read °पीड:. (*c*) Read °शोभां.

चतुर: कलाविलासे नियतम् यश्चांदो (*a*) भवत्यनंगस्य [।*]
मुक्तागुणस्तु हृदये मुक्तागुण एव वनिता[ना]म् [॥ ७ ॥*]

(*a*) Read नियतं चंडो

अगणितनरहयकरिकुलविमर्द्दजनितेन रेणुतुहिनेन [।*]
आरोपितशशिमण्डलसादृश्यसहस्रकरबिम्बे [॥ ८ ॥*]
पटहरवगर्ज्जितोग्रे विकोशनिस्त्रिंशतृपिद्युदाभोगे (*a*) [।*]
प्रचरितकुञ्जरजलदे विकालवर्षावतार इव [॥ ९. ॥*]

(*a*) Read °निस्त्रिंशविद्यु (dyu)°.

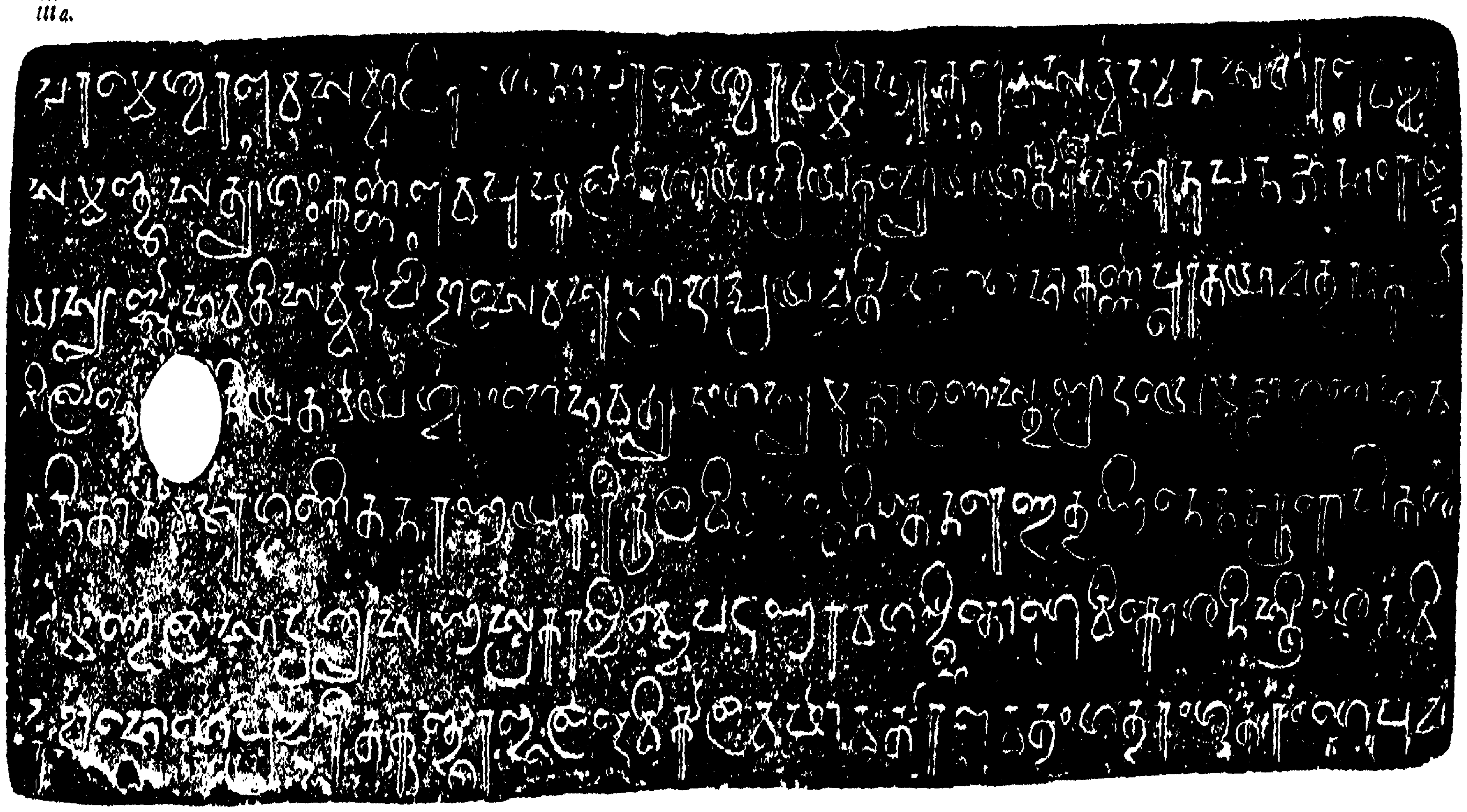
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[1] *South-Indian Inscriptions*, Vol. I, pp. 144 ff.

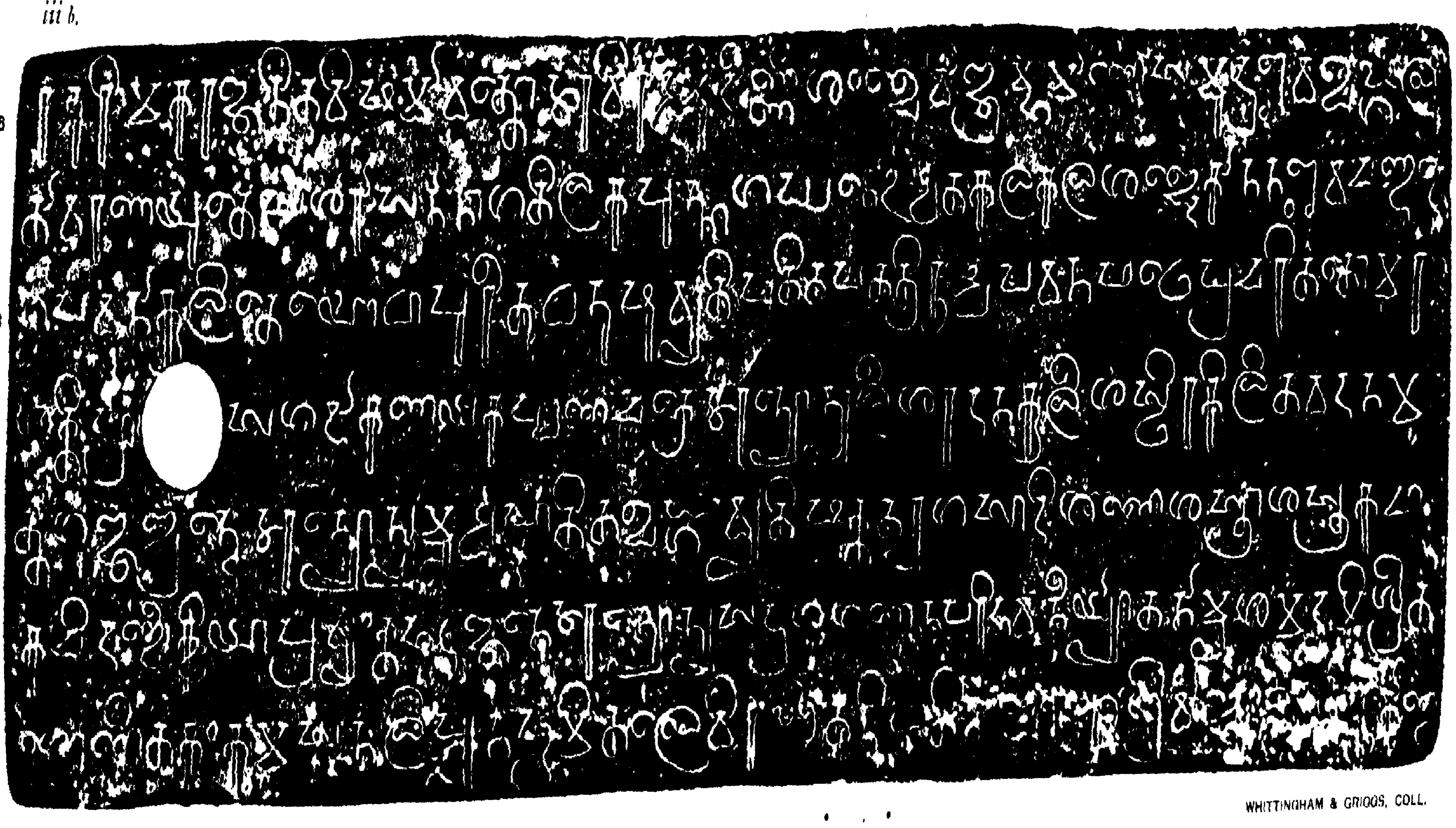
[2] As the notes on the text are numerous and contain long Nāgarī passages, I am using for them ordinary type instead of the small and indistinct note-type, which, as I know from experience, is liable to breaking and dropping.

Plates III and IV of the Kuram Grant of Paramesvaravarman I.

iii a.



iii b.

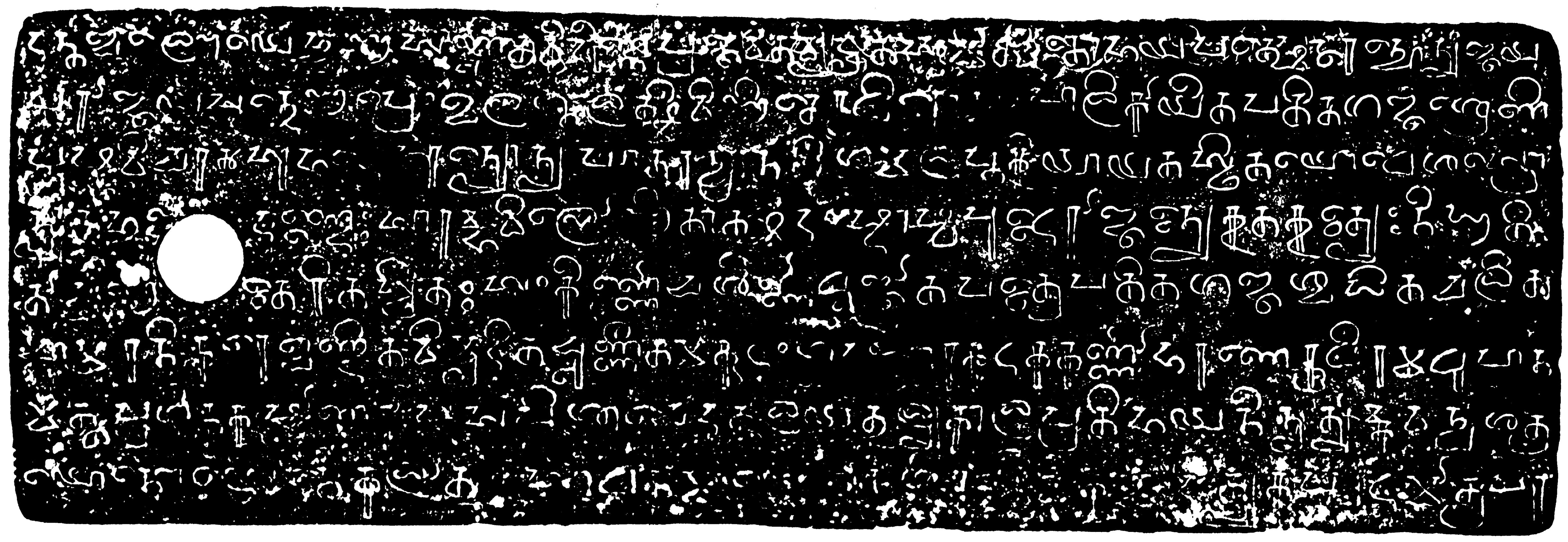


H. KRISHNA SASTRI

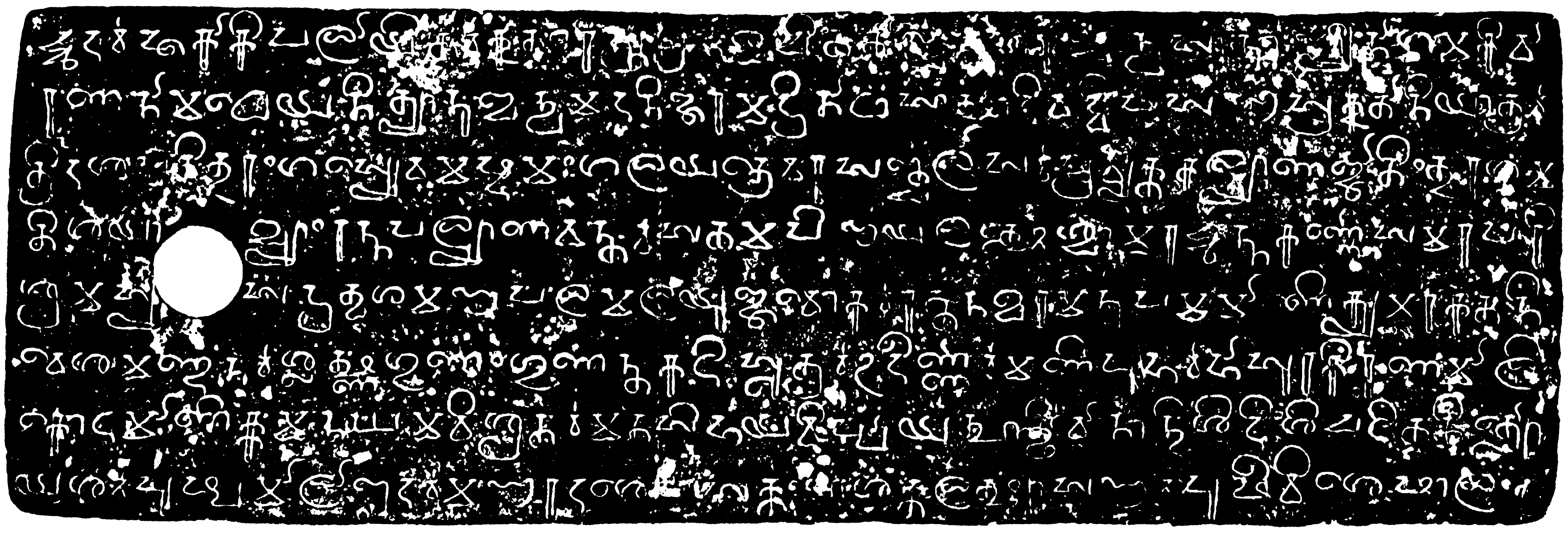
SCALE FULL SIZE

WHITTINGHAM & GRIGGS, COLL.

iv a.



iv b.



तुंगतुरंगतरंगे प्रचरत्करिमकरजनितविषमावर्त्तो (*a*) [।*]
अविरळमुद्रोर्णमंडि विजृम्भमाणे समुद्र इव [॥ १० ॥*] (*b*)

(*a*) Read °वर्त्ते. (*b*) Metre: Sugīti (32+27).

खड्गलतावरणयुते समरासन्ननागतिलकपुन्नागवने [।*]
उद्धतकलकलशब्दे कानन इव चण्डवेगपवनाकुलिते [॥ ११ ॥*] (*a*)

(*a*) Metre: Āryāgīti (32+32).

योधापुरोतधनुषु (*a*) व्यतिपतितपतत्रिकङ्कपवनपथे (*b*) [।*]
प्रचरिततोमरशक्तिप्रासगदाकणयकम्पणचक्रे (*c*) [॥ १२ ॥*] (*d*)

(*a*) Read योधापूरितधनुषि. (*b*) Read °पवनपथे. (*c*) Read °कम्पन°. (*d*) Metre: Pragīti (30+29).

अन्योन्यलोमरदनकुलोशस्थिरकिलितवदनमत्तगजवृन्दे (*a*) [।*]
अन्योन्यमूर्द्धपातितखड्गव्यतिषक्ततुरगसादिगणे [॥ १३ ॥*] (*b*)

(*a*) Read अन्योन्यरदनकुलिशस्थिरकीलित°. (*b*) Metre: Gīti (30+30).

शस्त्राशस्त्रकचाकचिदण्डोक्रियाप्रव्यंक्तभटजने (*a*) [।*]
अन्योन्यसदृशगणनपरिभवनोर्य्यातना (*b*) [॥ १४ ॥*]

(*a*) Read शस्त्राशस्त्रिकचाकचिदण्डादण्डिक्रियाप्रयुक्तभटे or °प्रवृत्तभटे. (*b*) Read °गणनापरिभवनिर्य्यातना. The remainder of this verse is left out by the writer.

मृगमदमिश्रोतशोणितकुंकुमघनलिप्य[मा*]नभूमितले (*a*) [।*]
विरचितनिपतितबाहुग्रीवाजं[घो]रुकाण्डदम्सबलौघे (*b*) [॥ १५ ॥*] (*c*)

(*a*) Read मृगमदमिश्रित°. (*b*) Read °लौघे. (*c*) Metre: Lalitā (30+32).

व्यूढस[म्या]तविद्रोर्णप्रजवितविद्रुत[भूमित]तोभयपक्षे (*a*) [।*]
अन्योन्यजयपराजयसन्देहप्रेंखलग्नलक्ष्मोविच्छिते (*b*) [॥ १६ ॥*] (*c*)

(*a*) From [म्या]त to the end, this line is engraved on an erasure. To satisfy the metre अभिसम्यात° might be read. (*b*) Read perhaps °विदिते. (*c*) Metre of verses 16-19: Āryāgīti.

रुधिरोघपालिकायोतपतितगजश्रेणिपृष्टविचरत्सुभटे (*a*) [।*]
अन्योन्यघातरन्ध्रानधि[ग]मलसक्रियायतस्थितयोधे (*b*) [॥ १७ ॥*]

(*a*) Read रुधिरौघपालिकायित° and °पृष्ठ°. (*b*) Read °लुप्तक्रियायित°.

शस्त्रौघतभुजदण्डैः (*a*) सारम्भविलोहिताचदष्टोष्ठपुटै[:*] (*b*) [।*]
राजन्यै[:*] कलकल्यैः नोद्धतिता[र्द्ध]हतैरितस्थितः (*c*) संकीर्णे च (*d*) [॥ १८ ॥*]

(*a*) Read शस्त्रौ. (*b*) Read संरम्भ°. (*c*) Read °कुलैर्निर्हतार्द्धहतैरितस्ततः. (*d*) The metre requires च to be cancelled.

शोणर्णध्वजातपत्रै[:*] पतितगजाश्व(*a*)सितचलितचामरनिकरे [।*]
खण्डितविखण्डितचूर्णितमकुटंगदहारकटककर्णाभरणे (*b*) [॥ १९ ॥*]

(*a*) Read °गजाश्व. (*b*) Read °मकुटांगद°.

रुधिरमधुपानमत्तप्रगीतकूष्माण्ड[राक्ष]सपिशाचे [।*]
द[त्त]लयतुल्यकालप्रतिभयनीनृत्यं(त्त्य)कबन्धशतयोनौ (a) [॥ २० ॥*] (b)

(a) Read °भयनत्यत्कबन्धशतयोनौ. (b) Metre : Gīti.

[योने]कलाद्यसाधनमा[योध]नशिरसि (a) विक्रमादित्य[म् ।*]
कर्प्पटमात्रपरिच्छदम्(b) एकाकिपलायितम् [ज्ञात](c) [॥] [२१ ॥*] (d)

(a) Read °खच°. (b) Read कर्प्पट°. (c) Read °च्छदमेकाकिपलायितं हतवान्.
(d) Metre : Āryā.

रत्नप्रभाखचितकाञ्चनशारिबन्ध (a)
सान्नाह्य(b) नागमकिवारणनामधेय[म्*](c) [।*]
नित्यानुबन्धमदनिजरमद्रिनाथ (d)
साक्षादिव द्विपसहस्रकृतानियातम् (e) [॥ २२ ॥*] (f)

(a) Read रत्न° and °बन्धं. (b) Read सन्नाह्य. (c) Read °मरिवारण°. (d) Read °निर्झरमद्रिनाथं.
(e) Read °कृतानुयातम्. (f) Metre : Vasantatilakā.

त्रिदशपतितुरंगस्येवमष्टमंगलयते (a)
वरसञ्चलसम् प्रव्यक्तकल्याणजातिं(b) [।*]
तुरगमतिशयाख्यां(c) रत्नपल्याणवन्तम्
सततमपि (d) हयलक्ष्यैश्चामरच्छत्रकर्णै[: ॥ २३ ॥*] (e)

(a) Read perhaps °तुरंगस्पष्टमांगल्ययातं. (b) Read perhaps वरमनलसमम्प्रव्यक्त°. (c) Read °याख्यं रत्नपल्याणवन्तं. (d) Read युतमपि. (e) Metre : Mālinī.

समरपरिश्रमस्य सदृत्वशमहपलमलयुजवोकम् (a) [।*]
रत्तनखरमनुपम (b) माणिक्यमरकतनिवेशमण्डनम् [॥ २४ ॥*] (c)

(a) Read °श्रमसदृशं त्वसममहोपलमालायुजमेकम्. (b) Read रत्न° and °मनुपमं च. (c) Metre : Gīti.

स्वर्णागुणं गुणस्तकटिसूत्रम् उदीर्णम् मणिप्रभम् (a) [।*]
भासुरकिरणमालिकोटमाणिक्यमनघमविशृतम् (b) [॥ २५ ॥*] (c)

(a) Read गुणवरकटिसूत्रमुदीर्णमणिप्रभम्. (b) Read °कोटिमाणिक्यमनर्घमभिश्रुतम्. (c) Metre : ?

मनसि भयवि[— — —*]र्प्पयन्पार्थिवाना- (a)
न्दिशि दिशि चटितनित्यौ यशम् पुष्पमाला[म्*] (b) [।*]
इदम् महरदशेष (c) सक्षया शक्तलक्ष्म्या
सह वपुषो (d) विशेषालंकृते वीरकृत्या [॥ २६ ॥*] (e)

(a) Read perhaps भयविषादावर्प्प°. (b) Read चलितारिदौ यशःपु°. (c) Read इयमहरदशेष.
(d) Read वपुषि. (e) Metre : Mālinī.

TRANSLATION.[1]

Mahēndravarman's . . . . . son (was) . . . . . **Paramēśvaravarman,**

(Verse 5.) who was a subduer of all (enemies), just as Bharata (bore the surname) Sarvadamana[2]; who avoided improper conduct (*asamañjasa*), just as Sagara banished (his son) Asamañjasa[3]; who possessed a strong body (*aṅga*), just as Karṇa (was the king) of the rich Aṅgas; who was fond of poems (*kāvya*), just as Yayāti was fond of (his father-in-law) Kāvya (Uśanas);

(Verse 6.) whose command always becomes a chaplet on the heads of (*i.e.* is received with respect by) independent kings, (but) also confers splendour on the faces of (*i.e.* fills with joy) (his) friends by reaching (their) ears, [just as an ear-ring (*karṇapūra*) becomes an ornament to the face];

(Verse 7.) (who) is clever in the sport of fine arts (*kalā*) (and) constantly passionate in love,[4] and who avoids vice (*mukt-āguṇa*) in (his) heart, (but) also (becomes) a pearl-necklace (*muktā-guṇa*) on the breast of (his) wives;

(Verse 21.) who put to flight **Vikramāditya**,—whose army (had consisted) of several lakhs, (but who was left) quite alone (and) covered only by a rag,—at the head of a battle,

(Verse 8.) in which the disk of the sun was made to assume the likeness of the circle of the moon through the mist of dust produced by the stamping of countless troops of men, horses, and elephants;

(Verse 9.) which inspired terror through the thunderlike sound of kettle-drums; in which unsheathed swords (reminded of) the curves of flashes of lightning; in which elephants were advancing like clouds; (and which therefore) resembled an unseasonable breaking of the monsoon;

(Verse 10.) in which tall steeds (looked like) high waves; in which elephants tore up the ground on their path, just as sea monsters produce whirlpools in diving up; in which conches were incessantly blown (or: cast up); (and which therefore) resembled the gaping ocean;

(Verse 11.) which contained curved swords and shields (*āvaraṇa*), (resembling) rhinoceroses, creepers, and *varaṇa* (trees); which teemed with heroes holding bows and (riding) mighty elephants, (as if it were) covered with *śara* (grass) and with *asana*, *nāga*, *tilaka*, and *punnāga* (trees); in which confused noises were raised; (and which therefore) resembled a forest agitated by a violent wind;

(Verse 12.) in which bows were bent by warriors; in which the air was obstructed by arrows flying past each other; in which javelins, pikes, darts, clubs, lances, spears, and discuses were flying about;

(Verse 13.) in which troops of *mast* elephants firmly impaled each other's faces with the thunderbolts of their tusks; in which squadrons of horsemen were connected by their swords that had struck each other's heads;

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[1] To make the construction clear, I had to place verse 21 before verse 8.

[2] Cf. *Mahābhārata*, I, 74, 8; VII, 68, 7, and *Śakuntalā*, ed. by Cappeller, p. 93, l. 2; p. 95, l. 24; p. 97, l. 8; p. 102, l. 21.

[3] In the epic poems he is called Asamañja or Asamañjas.

[4] The poet seems to hint a comparison of the king to the moon, who is 'charming in the splendour of his digits (*kalā*),' and to Śiva, who 'was angry with the god of love.'

(Verse 14.) in which soldiers were engaged in fighting with sword against sword, pulling of hair against pulling of hair, and club against club; . . . . considering each other as equal (or) despising (each other);

(Verse 15.) in which the ground (seemed to be) thickly smeared with saffron, as the blood (of the wounded) was mixed with the musk (anointing their bodies); in which (both) large armies had lost and dropped arms, necks, shanks, thigh-bones, and teeth;

(Verse 16.) in which, during the encounter, both parties were broken, urged on, put to flight, and stretched on the ground; which was witnessed by the goddess of fortune sitting on the swing of doubt about mutual victory and defeat;

(Verse 17.) in which brave warriors were marching on the back of lines of fallen elephants forming a bridge over the flood of blood; in which soldiers stood rendered motionless, as their blows did not hit each other's weak parts;

(Verse 18 f.) which was covered here and there with elephants which had fallen (simultaneously with shattered banners and parasols), and whose respirations waved the mass of chowries and with dead (or) half-dead warriors who had done their duty, whose strong arms (still) raised the weapon, whose lips were bitten, and whose eyes were deep-red with fury; in which tiaras, armlets, necklaces, bracelets, and ear-rings were broken, crushed, and pulverized;

(Verse 20.) in which Kūshmāṇḍas, Rākshasas, and Piśāchas were singing aloud, as they were intoxicated by drinking the liquor of blood; (and) which contained hundreds of headless trunks dancing together in a fearful manner and beating the time (with their hands).

(Verse 22.) Having caused to be accoutred the elephant named Arivāraṇa,—whose golden howdah was studded with the splendour of jewels, the flow of whose rut was incessant, (and who therefore) resembled the king of mountains (Himālaya) himself, whose torrents never cease to flow,—followed by thousands of (other) elephants;

(Verse 23.) also the excellent horse named Atiśaya,—who displayed the majestic stepping of the horse of the lord of gods (Indra); who manifested his noble breed by his active jumping; (and) who bore a saddle (set with) jewels,—accompanied by lakhs of (other) horses whose ears were surmounted by chowries;

(Verse 24.) (and having put on) an unique and unequalled curved dagger (set with) jewels, which was fit for the fatigue of battle, attached to a string of matchless big stones, (and) ornamented by being inlaid with rubies and emeralds;

(Verse 25.) (and) a valuable, priceless, famous girdle (which was strung) on a soft string, which emitted the splendour of gems, and the ruby at the end of which (resembled) the bright sun;

(Verse 26.) he (*viz.* Paramēśvaravarman) who had destroyed his enemies, inspiring with fear [and despair] the minds of princes, (and spreading) the flower-garland of (his) fame in all regions, carried all these (ornaments)[1] on (his) body that was highly adorned with heroic deeds, —along with the powerful goddess of fortune clinging (to him).

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[1] This seems to refer to verse 24 f.

No. 23.—DHANAIDAHA COPPER-PLATE INSCRIPTION OF THE TIME OF KUMARAGUPTA I: THE YEAR 113.

By Radhagovinda Basak, M.A., Calcutta.

This inscription, engraved on a thin copper-plate which now looks very much worn out and fragile, was discovered about a decade and a half ago in a village called Dhanāidaha in the Nātore Sub-division of the Rājshāhī District in the Rājshāhī Division of the Bengal Presidency. Babu Akshaya Kumāra Maitrēya, B.L., Director of the Varendra Research Society of Rājshāhī, obtained it from Maulvi Muhammad Ershed Ali Khan Choudhuri (now Khan Bahadur), and it is now deposited in the Museum of the Society along with the five copper-plate inscriptions[1] of the Gupta period recently discovered at Dāmōdarpur in the District of Dinājpur. It was edited in 1909 by Mr. R. D. Banerji, then of the Calcutta Museum, in the *Journal of the Asiatic Society of Bengal* (Vol. V, No. 11, pp. 459-61). Mr. Banerji's decipherment of the inscription was not correct, and the text as prepared by him contained some mistakes. Mr. Vincent Smith in his *Early History of India* (3rd Edition) has referred to this epigraph by the name of the Nātore inscription in a foot-note at page 327; but he could not make out any material for the history of the period, probably because Mr. Banerji's reading was unsatisfactory and because of his remarks that "the wording of the record is rather difficult to interpret," and that "no continued translation is possible of the text." While editing two of the Dāmōdarpur inscriptions belonging to the same monarch's reign, I had to revise the reading of this inscription, and I re-edited it in the Bengali monthly, the *Sāhitya* of Calcutta, in the Pausha issue, 1323 B.S. I now record the results of my decipherment in this Journal for the scrutiny of scholars. Some of the chief mistakes in Mr. Banerji's reading will be pointed out below in the foot-notes. Other differences in our readings may be left to be found out by those of our readers who may care to do so.

The inscription is a fragmentary one, consisting of 17 lines of writing incised in the early Gupta characters of the 5th century A.D. It is written on one side only of the plate, which is now very much corroded. In length the full plate seems to have been almost twice the fragment now preserved, which measures $5\frac{1}{4}'' \times 5\frac{1}{2}''$. Almost the whole of the proper right half of the plate is broken and lost together with the upper right and lower left corners. From an examination of the portions of the writing preserved in lines 14-16, which form parts of the well-known imprecatory verses, it can be ascertained that about a dozen and a half letters are cut off from the proper right side of each of the lines. This loss of almost half of the inscribed portion and the extremely blurred state of the letters preserved are the greatest obstacles in explaining the document. But the five newly discovered Dāmōdarpur copper-plates and the four Faridpur grants[2] have helped us much in deciding that the present plate also, like them, is not an ordinary royal land-grant, but is a sale-deed embodying the record of a purchase of land for the purpose of donation. Mr. Banerji states that the fragments of the proper upper right corner, which was broken in the exhibition grounds of the Calcutta Industrial Exhibition of 1906-7, contained the two letters *ma* and *ra*, which, he thinks, were evidently the second and third syllables of the name of the emperor Kumāra-gupta. The inscription is dated in 113, which must be referred to the Gupta era, and this evidently proves that it belonged to the time of the Gupta

[1] Above, Vol. XV, No. 7. I take this opportunity to acknowledge most thankfully the suggestion of Mr. K. N. Dikshit, M.A., Superintendent of Archæology, Eastern Circle, that I should have read 128 in place of 129 and 224 in place of 214 as the dates in Plates Nos. 2 and 5 respectively of the Dāmōdarpur inscriptions. These corrections in the dates do not quite materially affect the historical deductions I made in my paper on them published in this Journal.

[2] *Indian Antiquary*, 1910 and *J. A. S. B.*, 1911, No. 8.

monarch Kumāra-gupta I. The **language** of the inscription is Sanskrit, and it is in prose throughout excepting in lines 14-16, which contain the three imprecatory verses. Mr. Banerji's statement that "the bad state of preservation makes it very difficult to make any remarks on the orthography" cannot be upheld; for, the following points in respect of **orthography** may easily be observed :—

(1) as in the Dāmōdarpur copper-plates, the sign of the medial *ā* is attached by a hook-sign towards the bottom of the lower right of some of the letters, especially of *kha*, *ga* and *ṇa*, e.g. *khāsaka* l. 5, *Khādā(ṭā ?)pāra-* l. 7; *grām-āshṭa-* l. 6; and *guṇ-āguṇa-* l. 13;

(2) the sign of *avagraha* is not used, as in *-vishayē=nuvṛitta-* l. 7;

(3) the letters *ga*, *ṇa*, *ta*, *ma*, *ya* and *va* (and not *sha*, e.g. *varsha-* l. 15) are doubled with a preceding *r*, e.g. *vargga-* l. 4, *svarggē* l. 15; *utkīrṇṇaṁ* l. 17; *kīrtti* l. 4; *-śarmma* ll. 3 and 5, *dharmma* l. 8; *-maryyādā-* l. 7; and *-pūrvva* ll. 2 and 16, *sarvva* l. 9;

(4) *m* has sometimes been joined with following *pa* and *va*, e.g. in *svadattām-para-dattām=vā* l. 14; and

(5) *ka* has been doubled with a following *r*, e.g. in *kkramēṇa(ṇa)* l. 8.

The form of the initial vowels *ā*, *i* and *u* are seen in the following words respectively, *āyuktaka* l. 11, *iha* l. 7, and *utkīrṇṇaṁ* l. 17. The form of the letter *mē* in *kkramēṇa(ṇa)* l. 8, *sarvvam=ēva* l. 9, *Stha(Sta)mbhēśvara* l. 17, and *-kulyavāpam=ēkaṁ* l. 11, is to be noticed. For a similar incision of *mē*, especially the *ē* mark in it, we may compare the words *kāvyam=ēshāṁ* l. 31 in Fleet's, C. I. I. Vol. III, No. 1 and *guhām=ētām* l. 5 (*ibid*, No. 6), and the word *dōsha-grāmō* l. 1 (wrongly read as *dās-āgrēṇa* by Mm. H. P. Śāstri and Mr. R. D. Banerji) of the Susunia Rock Inscription (above, Vol. XIII, p. 133). In my paper on "The Five Damodarpur copper-plate inscriptions of the Gupta period," published in this Journal (*vide* Vol. XV, Part III), I made a remark at the outset that those sale-deeds, which our present inscription resembles, "may be regarded as having roughly six different parts in the form in which they are drawn up." The same remark holds good with regard to this inscription also. The first part ends with the word *vijñāpitā* l. 7, the second with *dā[tuṁ]* l. 8, the third with *tad=avadhṛitam=iti yatas* l. 10, the fourth with *ēkaṁ dattaṁ* l. 11, the fifth with *-Varāha-svāminō dattaṁ* l. 12, and the sixth with the rest of the grant.

The **contents** of the inscription may be stated as follows :—In the year **113** G.E. (=432-33 A.D.), belonging evidently to the reign of Kumāra-gupta I, some one (very likely a royal officer, an *āyuktaka*) whose name seems to have ended in *-vishṇu* (l. 7) approached the village house-holders, the *mahattaras* and the *ashṭa-kul-ādhikaraṇas* and perhaps also the local government of the district and expressed to them his desire to purchase one *kulyavāpa* of cultivated land by paying the price at the usual rate prevalent in the *vishaya* of *Khādā(ṭā ?)pāra*. It seems that the applicant wanted to buy the land by destroying the *nīvī-dharma* (the non-transferability of it), *i.e.* with the right of alienation. His prayer was granted and the purchased land was severed for him by proper measurement. He in turn seems to have made a donation of the same to a Sāmavēdin Brāhmaṇa (*chhandōga* l. 12) of the name of Varāha-svāmin. It seems very probable, though the mutilated condition of the plate does not permit us to be very confident on the point, that the Dhanāidaha plate contained a reference to the Puṇḍravardhana *bhukti* being under a governor appointed by the Gupta ruler (compare the Dāmōdarpur plates of the years **124** and **128** G.E., belonging to the same monarch's reign) and that the *vishaya* of Khādā(ṭā ?)pāra was, like Kōṭivarsha, one of the many districts of the same *bhukti*. In the Khālimpur copper-plate[1] of Dharmapāla, King of Gauḍa, though of the 9th century A.D., we have the names of two other *vishayas*, viz. Mahāntāprakāśa (l. 31) and Sthālikkaṭa (l. 41), as being situated in the *bhukti* of Puṇḍravardhana.

[1] Above, Vol. IV, p. 249.

Dhanaidaha Copper-plate of the time of Kumāragupta I : the year 113.



F. W. THOMAS

SCALE SIX-FIFTHS (ENLARGED)

WHITTINGHAM & GRIGGS, COLL.

I edit the inscription from the original plate :—

TEXT.

1 . . . . **mvatsara[1]-śat[ē] trayōdaś-ōtta[2]-**

2 . . . . n=d[i]vasa[3]-pūrvvāyāṁ parama-daivata-para-[4]

3 . . . . ā (?) kuṭu[mbi] . . . . . . brāhmaṇa-Śivaśarmma-Nāgaśarm=ma-maha-[5]

4 . . . . va-kīrtti-Kshēmadatta[6]-Gōshṭhaka - Varggapāla - Piṅgala - Śuṅkuka-Kāla-

5 . . . . pa (?)-vishṇu - [Dēva]śarmma - Vishṇubhadra[7] - Khāsaka - Rāmaka-Gōpāla-

6 . . . . sa (?) su (?) Śrībhadra-Sōmapāla-Rām-ādyāḥ (?) grām-āshṭa-kul=ādhikaraṇañ=cha

7 . . . . **vishṇunā** (?) vijñāpitā iha[8] **Khādā(ṭā ?)pāra**-vishayē=nuvṛitta[9]=maryyādā-sthi[ti]-

8 . . . . nīvī-dharmma-kshayēṇa labhya[tō] [ta]d=arhatha mam[10]=ādy=ānēn=aiva kkramēna(ṇa) dā[tuṁ]

9 . . . . samētya=ā(?)bhihitai(ḥ ?) sarvvam=ēva * jñā(?)kara-prativēśi(?)-kuṭumbibhir=avasthāpya ka-

10 . . . . * ri * kana * yad=itō * * [ta]d=avadhṛitam[11]=iti yatas=tath=ēti pratipādya·

11 . . . . vaka[12]-nalā[bhyā]m=apaviñchhya kshētra-kulyavāpam=ēkaṁ dattaṁ tataḥ āyuktaka-

12 . . . . * bhrā(?)tṛi - kaṭaka - vāstavya[13] - chhandōga - brāhmaṇa - **Varāha=svāminō** dattaṁ tad=dha-[va ?]

13 . . . . bhūmyā dā[n=ākshē]pō cha guṇ-āguṇam[14]=anuchintya śarīra-ka(kā)ñchanakasya chi-

14 . . . . ā [u]ktañ=cha bhagavatā Dvaipāyanēna Svadattām=para-dattāṁ=vā

15 . . . . [bhiḥ] saha pachyatō [||*] Shashṭiṁ[15] varsha-sahasrāṇi(ṇi) svarggē mōdati [bhū]midaḥ [|*]

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[1] Read *saṁvatsara-*. [2] Read *-ōttarē.* [3] Read *asyān=divasa-*.

[4] Read *-paramabhaṭṭāraka-*. In the Dāmōdarpur plates also Kumāra-gupta I is styled *parama-daivata.*

[5] Read, perhaps, *mahattara-*.

[6] & [7] Mr. Banerji reads *Kshamavanta* and *Vishyabhadra.*

[8] Mr. Banerji reads *Mahā-khushāpāra.*

[9] Mr. Banerji reads *nivatta* instead of *anuvṛitta.*

[10] Mr. Banerji's reading "*māśādya nanu vakkra lēna* (?)" instead of our reading "*mam=ādya-ānēn=aiva kkramēna(ṇa)*" and his remark on the palæography of his supposed *la* in his own reading *lēna* (!) is unwarranted.

[11] Instead of *avadhṛitam=iti yatas=tath=ēti* Mr. Banerji read *dahyakam=iti yatas=t(y)ajati.*

[12] Read *ashṭaka-navaka-nalābhyāṁ.* The sense of the whole document depends on the correct reading of this line of the inscription, and Mr. Banerji's reading gives no help. His reading of the whole line is as follows: — " . . . . . . *vara nālaka sada* (?) *vi* . . *chya* . . . . *kṛitya vasa-laka* (?) *datta tataḥ suyuktaka* . . . ."

[13] Mr. Banerji reads *vantēbhya* (?) for *vāstavya* and *chāndaśa* (?) for *chhandōga.*

[14] Mr. Banerji reads *śuṇu* (?) *guṇam.*

[15] Mr. Banerji reads *śashṭi(ṁ).*

16 . . . . [Pū]rrva-dattām dvijātibhyō yatnād-raksha Yudhishṭhira [|*] mahīm [mahī][matāṁ-chhrēshṭha*]
17 . . . . ya[ṁ] su (?) **Śrībhadrēna(ṇa)** utkīrṇṇaṁ **Stha(Sta)mbhē-śvara**[1]**dāsē**[na] . . . .

TRANSLATION.

In the year one hundred exceeded by thirteen . . . . . . on this day (as above specified), [during the reign of] *parama-daivata parama-bhaṭṭāraka, etc.* **Kumāra-gupta** . . . . the ryots (of the village) . . . . the Brāhmaṇas Śiva-śarman, Nāgaśarman and the *Mahattaras*[2] [Dē?]vakīrtti, Kshēmadatta, Gōshṭhaka, Varggapāla, Piṅgala, Suṅkuka, Kāla . . . . . . , -vishṇu, Dēvaśarman, Vishṇubhadra, Khāsaka, Rāmaka Gōpāla, ... su (?) Śrībhadra, Sōmapāla, Rāma and others, and the officer[3] in charge of eight *kulas* in the village were informed by (some officer whose name appears to have the ending **Vishṇu** l. 7) as follows :—

" In this *vishaya* of **Khāḍā(ṭā ?)pāra** the established custom (regarding the sale of cultivated land) prevalent . . . . . to be had (at . . . . . such rate) by the nullification of the custom of permanent endowment[4] (*nīvī-dharma*). So deign to make a gift (of land) this day according to this method . . . . by the neighbouring house-holders who are obedient and who are (thus) addressed establishing . . . . ."

Whereas it was so determined, and whereas this determination was accepted by the statement "be it so"—one *kulyavāpa*[5] of cultivated land was given to him, with its area severed[6] by the measurement of 8 × 9 reeds.

Then the same land was given to the *Chhandōga*[7] (Sāmavedin) Brāhmaṇa **Varāha-svāmin,** an inhabitant of the *kaṭaka*[8] of . . . . . , by this official[9] (*āyuktaka*).

So, considering the merit and demerit respectively of making a gift and confiscating (it), and (the unstability) of body and gold, (this gift is to be preserved). To the same effect has been stated thus by Bhagavān Dvaipāyana (Vyāsa) :—

(1) Whoever confiscates land given by himself or by another becomes a worm in ordure and rots with his forefathers.

(2) Land has been given by many kings, such as Sagara and others : the reward (of these grants) belongs to whosoever at any time possesses the earth.

(3) O Yudhishṭhira, best of land-lords, preserve with care land already given to the twice-born (Brāhmaṇas); for, the preservation of land-grants is more meritorious than the making of a grant. Engraved by su (?) **Śrībhadra** and (written) by **Stambhēśvaradāsa.**

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[1] Mr. Banerji reads the name as *Sthahnēśvara*.

[2] *Vide* my note on this word in Plate No. 4 of the Dāmōdarpur collection, above, Vol. XV, p. 137.

[3] *Vide* my note on this word, *ibid*, p. 137. Mr. Banerji's explanation of this term as "a local officer (*kulādhikaraṇa*) who exercised authority over eight villages" does not seem to be correct. He was rather an officer in the village having supervising authority over eight *kulas* (for the technical meaning of which see Kullūka's commentary on *Manu*, VII, 119).

[4] *Vide* my note on the term *nīvī* in Plate No. 1 of the Dāmōdarpur collection, above, Vol. XV, p. 131, n. 8, and *Indian Antiquary*, 1919, p. 14.

[5] *Vide* my note on this word on p. 132, above, Vol. XV.

[6] The word *apaviñchhya* occurs in the Faridpur grants (*Indian Antiquary*, 1910) and in Dāmōdarpur plate No. 3, l. 10, p. 136, above, Vol. XV.

[7] *Chhandōga* means one studying the Sāmavēda. For the use of this term *vide Manu*, III, 145; and the Banskhēra Plate of Harsha, above, Vol. IV, p. 211.

[8] *Kaṭaka* may either mean a camp or the capital.

[9] *Vide* my note on the same in Plate No. 4 of the Dāmōdarpur collection, p. 140, above, Vol. XV.

No. 24.—SOME IMAGE INSCRIPTIONS FROM EAST BENGAL.

By Nalinikanta Bhattasali, M.A., Curator, Dacca Museum.

The short votive inscriptions recorded on the pedestals of images are often very useful to the antiquarian in more ways than one. They not only illumine the darkness of the past like flash-lights by furnishing pointed and concise historical information, but the help that they give in determining the periods of sculptural history is by no means inconsiderable. Students of iconography too have reason to welcome them, since many votive inscriptions contain the names of the images on whose pedestals they are inscribed, helping thus to identify them easily. Below I edit six such votive inscriptions from East Bengal, in some of which all the three characteristics noted above will be found to exist to the fullest degree.

1. THE BHĀRELLĀ NARTTĒŚVARA IMAGE INSCRIPTION.

The worship of images of **Naṭēśa-Śiva** (the dancing Śiva) seems to have been a peculiarity of Southern India. Such images in metal abound in Southern India and Ceylon; but they are very rarely met with in the North-Indian Provinces. How Bengal came to share this peculiarity with the Deccan is one of the unsolved problems of history. We must, however, note here that north and west Bengal do not show this peculiarity, and it is only in the south-eastern districts, roughly comprising the ancient divisions of Vaṅga and Samataṭa, that images of the dancing Śiva were discovered. The Dacca Museum has three excellent specimens, while a rather ill-preserved one is to be found in the Rājshāhi Museum.[1] I know of two other very well preserved Naṭēśa images, which are being worshipped in two villages in the Dacca and Tippera districts of East Bengal.

The discovery of so many images of the same class in a rather limited area cannot be accidental, and it is quite possible that their worship was introduced by some Śaiva ruling family. The Sēna kings, whose origin some trace to the Deccan, had their metropolis in Vikramapura in the Dacca district, in the heart of the ancient Vaṅga, as is attested by the majority of their copper-plates, and they were renowned Śaivas. It is very probable that the worship of Naṭēśa-Śiva came from Southern India with the Sēnas. It is worth noting that out of the seven images so far discovered and known to me, five came from Vikramapura; and a village situated in the suburbs of the capital of the Sēnas in Vikramapura (a *pargaṇa* in the Dacca district) contains the ruins of a big temple and is still called Nāṭēśvara. The present image, however appears to be earlier than the Sēnas.

The inscription here edited was found on the pedestal of a huge image of Naṭēśa-Śiva dug out of a tank in a village called Bhārellā, Police Station Baḍkāmtā, in the district of Tippera. It was brought to my notice in 1911; and in 1912 I went to Bhārellā too late to save the image, which was broken to pieces by a fanatic Fakir; but I procured the inscribed pedestal for the Dacca Sāhitya Parishat, where it is at present preserved. A large fragment of the figure of the god is now in the Dacca Museum. I edit the inscription from the original.

The inscription is in two lines in four sections on four planed faces of the pedestal, below the lotus-seat of the god. The whole inscribed surface measures in length about 14″, and the letters are approximately ¼″ long. The first section has suffered a little by the peeling of the stone, while the beginning of the third and the longest section has been altogether chopped off, damaging altogether 12 or 13 letters of each line. The first line runs connectedly to the end of

[1] The image was found in the village of Kalikāl under Police Station Lauhajang in the Dacca district. So it must not be taken as an instance of a find in north Bengal.

the third section and then returns to the first section to begin the second line. The name of the sculptor is given in the fourth section in two lines

The characters used are the ordinary north-eastern characters which gave birth to the modern Bengali script, and which even at this stage show distinct resemblance to the modern script of Bengal. Paleographical considerations would lead us to assign the latter half of the 10th century as the time when this inscription was incised. The date is missing; but it may be that the lost portion of the second line in the beginning of the third section contained a date. There are some data from which a date perhaps is obtainable by mathematical calculation. The image was consecrated on a Thursday, under the star Pushya, on the fourteenth day of the dark half of the month, the day being the 14th of Āshāḍha counted by the movement of the moon. It would be a very interesting calculation to lovers of astronomical problems to find out in which year or years between 900-1100 A.D. all these data met. I myself do not possess the necessary equipment for the calculation. Dewan Bahadur L. D. Swamikannu Pillai who was consulted by Mr. Krishna Sastri on my behalf kindly writes :—

"Between 900 A.D. and 1000 A.D. there are three dates which agree perfectly, viz. A.D. 912, 939 and 983. I have marked these with an asterisk in the accompanying list which shows also dates of less perfect agreement. There must be an equal number between A.D. 1000 and A.D. 1100. We cannot tell which of these dates is meant.

Thursday Ashadha, ba. 14. Pushya.
A.D. 905. Th. 4 July ; .32 ; n. f. d. .75.
A.D. 912. Th. 16 July ; .09 ; .63.*
A.D. 925. Th. 21 July ; f. d. t. .52 ; f. d. n. .68.
A.D. 932. Th. 5 July ; .52 ; f. d. n. .90.
A.D. 939. Th. 18 July ; .41 ; .86.*
A.D. 942. Th. 14 July ; f. d. t. .12 ; f. d. n. .89.
A.D. 966. Th. 19 July ; .71 ; f. d. n. .09.
A.D. 969. Th. 15 July ; f. d. t. .21 ; f. d. n. .90.
A.D. 983. Th. 12 July ; .03 ; .94.*
A.D. 993. Th. 20 July ; f. d. t. .01 ; f. d. n. .30."

He adds: "14th *tithi* means nothing more or less than 14th day by the movement of the moon. A solar month date would be different, but in a lunar month the days and *tithis* are the same in the Indian Calendar. In the Muhammadan, Jewish and Greek Calendars there may be a slight difference."

The inscription refers itself to the 18th year of the reign of a king **Layaha-Chandra** by name. Kings with the surname Chandra are found on the thrones of two adjacent countries, viz. Vaṅga and Arakan. The Chandra kings of Vaṅga, who, like the Sēna and the Varman kings, had their capital in Vikramapura, are known from two copper-plates.[1] But no name in their geneology resembles Layaha-Chandra, which sounds indeed rather outlandish. We find an account of the Chandra kings of Arakan in Phayre's *History of Burma*, p. 45, and *Numismata Orientalia*, Vol. II, Pt. I, p. 42, by the same author, where we learn that the dynasty came to an end in 957 A.D. We know of another isolated Chandra king of Vaṅga, Gōvinda-Chandra by name, from Rājēndra-Chōḷa's inscription.[2] Layaha-Chandra-dēva must have belonged to one of these three lines. If Layaha-Chandra was of the Arakan line, **939 A. D.** may be taken as the date of this inscription.

[1] *Ep. Ind.*, Vol. XII, p. 136 and *Dacca Review*, Vol. II, p. 250. Recently a third plate of Śrī-Chandra-dēva was found and edited by me in the *Dacca Review* for May and June 1919, 17. XII. 1919.

[2] *Ep. Ind.*, Vol. IX, pp. 232-233.

Ballads, at one time very widely popular are current about a king called Gōvinda-Chandra throughout Bengal. One was published by Grierson in J. A. S. B., 1873. Another was published by Babu Śib Chandra Śil from Chinsura near Calcutta. I published a version by a poet called Bhabānīdās, edited from two manuscripts of the song procured from the Tippera district. All these versions say that Gōvinda Chandra was the daughter's son of Tilak Chandra king of Mēhārkul which is still a *pargaṇa* of the Tippera district. Gōvinda Chandra of Rājēndra-Chōḷa's inscription and the Gōvinda-Chandra of the ballads appear to have been the same person, and Layaha may have been the name of the father of Tilak Chandra.

Kusuma-dēva, whose son **Bhāvu-dēva** consecrated the image of **Narttēśvara**, seems to have been a vassal prince under the suzerainty of Layaha-Chandra, ruling over **Karmmānta**, which I am inclined to identify with modern **Baḍkāmtā** (the senior Kāmtā), some three miles south-west of the find-place of the image. Baḍkāmtā is still a place of considerable importance, being a police station with a big Zemindary kachery, situated within a spacious area surrounded by an ancient moat and containing two big tanks, in the smaller of which many ancient stone images of Brahmanical deities were found. Stone images, both Buddhist and Brahmanical, abound in the villages surrounding Baḍkāmtā, and testify to the former prosperity of the tract. The area surrounded by the moat probably indicates the site of the palace. The appellation *Dēva* at the end of the names of Kusuma-dēva and Bhāvu-dēva is also in favour of supporting their claims to royal dignity. My friend Prof. Rādhāgōvinda Bāsak, M.A., however, is in favour of taking the word Karmmānta to mean 'a store of grain,' and degrading Kusuma-dēva to the rank of an officer in charge of the royal granary. We know that the two plates of Dēva Khaḍga published by the late Gangamohan Laskar in the Memoirs, A. S. B., Vol. I, were issued from Jaya-Karmmānta. I have elsewhere tried to show that Karmmānta the capital of the Khaḍgas and the Karmmānta of the present inscription are identical, and is the present Baḍkāmtā (J. A. S. B., July 1914).

The language of the inscription is **Sanskrit** prose throughout. As to **orthography**, we may note the doubling of consonants after *r* as in *karmmānta* (l. 1), *sarvvākshara* (l. 2), etc., but *chaturdaśyām* (l. 1) is spelt with one *d*.

Numeral figures for 1 and 4 are used in designating the 14th day of Āshāḍha.

The letters of the inscription are mentioned to have been engraved by one **Ratōka**; but **Madhusūdana** seems to have been the sculptor who made the image.

TEXT.

Part I.

1 [सिद्धिरस्तु[1]] श्रीमल्लयहचन्द्रदेवपादीयविजयराज्ये अष्टा[दश * * * * * शु]क्लचतुर्द्दश्यां
तिथौ वृहष्पति[2]वारे पुष्यनक्षत्रे कर्म्मान्तपालश्री-

2 कुसुमदेवसुतश्रीभावुदेवकारितश्रीनर्त्तेश्वरभट्टा[* * * * * * *] चन्द्रगत्या
. आषाढ़दिने १४ ॥ खनितञ्च रतोकेन सर्व्वाक्षरः

Part II.

1 खनितञ्च श्रीमधु-

2 सूदनेनेति ॥

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[1] Expressed by a symbol; see below, p. 352.

[2] Read बृहस्पति.

N. B.—It is customary to read the auspicious symbol or in the beginning of an inscription as ओं and this interpretation has been adopted by eminent epigraphists like Hoernle and Fleet. Hoernle writes thus (Intro. *Bower Manuscripts, Indian Antiquary* reprint, p. 22) :—"Indian manuscripts or records as a rule commence with some benedictory word, such as *siddham* 'success' or *swasti* 'hail' or with the sacred particle *Ōṁ*. The last mentioned is almost universally used at the present day. It may be either written in full or indicated by a symbol. The latter takes the form of a spiral, which may turn either to the right or to the left, and which is probably a conventional representation of the sacred *śaṅkha*, or conch-shell." In editing the Mankuwar Stone Image Inscription of Kumāra-gupta, where this symbol is met with for the first time, Dr. Fleet remarks (*Corpus. Ins. Ind.*, p. 46, n. 3) :—"As was usual throughout the whole of the period covered by this volume, this word is represented by a symbol, not by letters. *Ōṁ* is not of very frequent occurrence at the commencement of Buddhist inscriptions." Thus both the scholars read the symbol as *Ōṁ*, but none has advanced any reason for their reading it so. Writing about eight centuries and a half earlier, Al Beruni also says the same thing (Vol. I, p. 173) :—"The Hindus begin their books with *Ōṁ*, the word of creation, as we begin them with 'In the name of God.' The figure of the word *Ōṁ* is . This figure does not consist of letters; it is simply an image invented to represent this word, which people use, believing that it will bring them a blessing and meaning thereby a confession of the unity of God." This passage of Al Beruni is perhaps responsible for the confident reading of Hoernle and Fleet. But the reading should be reconsidered in the light of the following points :—

(*a*) In Bengal, this symbol was largely used in all ancient documents and manuscripts and in teaching alphabets to beginners they were taught to draw this symbol to start with. This custom was prevalent as late as twenty-five years ago, but has disappeared by this time. This symbol was called *āṁji* and was supposed to signify the god Gaṇēśa, the giver of success, being drawn to represent his elephant's trunk. In reading, it was read *Siddhir=astu.*

(*b*) In the Gupta inscriptions this symbol only appears in those in which the customary benediction *Siddhaṁ* is left out, and nowhere does it appear with it. Consequently it must have stood for *Siddhaṁ*, and as time went on it must have become more and more customary to represent the word by this symbol.

(*c*) In some inscriptions the symbol is found to precede *Ōṁ*, which would never have been the case if the two were identical. In such cases the reading given is *Ōṁ*, *Ōṁ*, which is certainly not reasonable. Reference may be made to *Epigraphia Indica*, Vol. XII, p. 8, *Ibid*, Vol. XIV, p. 159, for examples of the joint use of *Ōṁ* and this symbol.

In view of these facts, the symbol, I think, should be read *Siddhaṁ* or *Siddhir=astu* [1]

TRANSLATION.

Part I.

May success attend! In the eighteenth year of the victorious reign of His glorious Majesty **Layahachandra-dēva**, on Thursday in the dark Fourteenth Tithi, and under the star Pushya, **Bhāvu-dēva**, son of **Kusuma-dēva**, Lord of **Karmānta**, caused to be made the Lord **Narttēśvara** . . . . **on the 14th day of Āshāḍha** (calculated) by the movement of the moon. And all the letters engraved by **Ratōka.**

Part II.

Also engraved by the illustrious **Madhusūdana.**

[1] [This seems to be the proper interpretation of the symbol, in spite of Al Beruni's statement to the contrary. In the Tamil country the same symbol slightly modified is even today called the Piḷḷaiyār-śuḻi 'Gaṇēśa's curl' and is first taught to be drawn by children before they begin to learn their alphabet.—Ed.]

2. THE BĀGHĀURĀ NĀRĀYAṆA IMAGE INSCRIPTION.

This inscription was brought to my notice in 1912, when I went to Tippera to secure the inscription described in the foregoing pages. Ramānāth Chakravarty, a former pupil of mine, whom I met in Comillā, gave me to understand that an inscribed image of Vishṇu had been discovered in a village near the Sub-divisional town of Brāhmanbāriā in the Tippera district and that the local people had been able to read the word **Mahīpāla** on the inscription. My curiosity was considerably roused to come across an inscription of the **Pāla** kings so far east from their native home in north Bengal. Pressure of business, however, did not allow me to go after the inscription at that time, and for the next two years I was too busy elsewhere to think of getting at it. Towards the beginning of the year 1914 a friend of mine, Babu Upendrachandra Guha, B.A., B.T., who is an enthusiast in matters archæological, secured chalked photographs of the inscription and published an article with a reading of it in the local monthly, the *Dacca Review*. The reading, however, was rather defective, and I gave a more correct reading in the next number of the journal. I also published a correct reading of the inscription in the January number of the *J. A. S. B.*, 1915 and pointed out its importance.

The image containing the inscription was dug out of a pond some ten or twelve years ago in the village of Bāghāurā near the Sub-divisional town of Brāhmanbāriā in the district of Tippera. It is now worshipped by a half-crazy woman in the neighbouring village of Vidyākūṭa. In January 1915 I visited the spot and obtained some excellent photographs of the image; but no amount of persuasion could prevail upon the woman to part with the image.

The inscription purports to be of the third year of king Mahīpāla, presumably **Mahīpāla I** of the Pāla dynasty of Bengal. It records the installation of the god **Nārāyaṇa** in **Samataṭa,** included in the kingdom of Mahīpāla, by a merchant, **Lōkadatta**, son of **Vasudatta** and hailing from the village of **Bilakīndaka**, in furtherance of the religious merit of himself and parents. Bilakīndaka is in all probability the village **Bilakēnduāi**, situated close to Bāghāurā.

The importance of the inscription is twofold. First, it definitely settles the position of the kingdom of **Samataṭa**. There is no room for doubt now that the village of Bilakēnduāi must have been inside the kingdom of Samataṭa. Now let us recall what Yuan-Chwang says about Samataṭa. The pilgrim came to the country of Samataṭa going 1,200 or 1,300 *li* south of Kāmarūpa. Taking 5 *li* to 1 mile, 1,200-1,300 *li* represent about 250 miles. The country of Samataṭa was about 3,000 *li* (i.e. 600 miles) in circuit and bordered on the great sea. The land lay low and was regularly cultivated. Now, if we look round for the country which must satisfy all these conditions and at the same time must include the Brāhmanbāriā Sub-division of the Tippera district, in which the village of Bilakēnduāi is situated, and if we remember that natural barriers such as mountains and rivers marked off one kingdom from another in those days, we cannot but accept the plain tract of land bounded by the Garo and the Khasi Hills and the hills of Tippera on the north and east, by the Lauhitya, or the old Brahmaputra river, on the west, and by the Bay of Bengal on the south as the ancient kingdom of Samataṭa. It is a perfectly natural geographical unit with neatly marked boundaries, comprising the eastern half of the present Mymensingh and Dacca districts lying east of the Brahmaputra, the greater part of Sylhet, and the whole of the Tippera and Noakhali districts. The distances between countries recorded by Yuan-Chwang are, in all reasonable probability, distances between the capital towns; and the distance of 250 miles recorded by Yuan-Chwang between Kāmarūpa and Samataṭa is pretty accurately the distance between Gauhāti and Comillā[1] by any modern route. The circuit of 600 miles is also right and the tract, which is a vast plain, borders on the great sea.

[1] I am of opinion that Baḍkāmtā, 12 miles west of modern Comillā, was the ancient capital of Samataṭa. *Vide* my paper "A forgotten kingdom of East Bengal," *J. A. S. B.*, March 1914.

There has been much discussion about the situation of the countries of *Shi-li-ch'a-ta-lo Kia-mo-lang-kia*, etc., mentioned by Yuan-Chwang in his account of the kingdom of Samataṭa; but no satisfactory solution seems to have been arrived at. With our present identification of Samataṭa we may proceed to consider their cases also. This is what we find in Beal's edition about them :—

"Going *north-east* from this to the borders of the ocean, we come to the kingdom of Śrikshetra (Shi-li-ch'a-ta-lo). Farther on to the *south-east* on the borders of the ocean, we come to the country of Kamalaṅka (Kia-mo-lang-kia). Still to the east is the kingdom of Dvārāpati (To-lo-po-ti). Still to the east is the country of Ishanapura (I-shang-na-pu-lo). These six countries are so hemmed in by mountains and rivers that they are inaccessible."

Now, the pilgrim says that the country of Shi-li-ch'a-ta-lo might be reached by proceeding *north-east* to the borders of the ocean. This anomalous statement seems to have puzzled everybody, including Beal and Watters, as the borders of the ocean are never reached by going *north-east* from Samataṭa, wherever its position might have been in eastern India, and the fact that all the original copies of the Travels available, as well as the biography of the pilgrim, give north-east as the direction, has stood in the way of emending the text to *south-east*. My studied opinion is that in spite of the unanimity of all the versions, north-east is a manifest mistake for south-east and the apparent unanimity arises from the mistake having originated in a very early copy of the 'Records.' The very qualifying phrase that the direction would lead to the borders of the ocean is sufficient for the emendation. But the emendation is confirmed by the manner in which the succeeding sentences begin. The next sentence begins thus,—"*Farther on* to the south-east, etc." and this would lose all force if "south-east" had not been the direction spoken of in the previous sentence. If we accept south-east and move from Comillā in that direction to the borders of the ocean, we arrive at a place called at present Chattagram (Eng. Chittagong), which was anciently called Śri-Chattala, a name still frequently used. Is there any reasonable objection to identifying Yuan-Chwang's Shi-li-ch'a-ta-lo with Śrī-Chattala of the present times? It is evident that it satisfies all conditions.

The second importance of the inscription lies in the fact that it throws some light on an obscure part of the history of the Pāla kings of Bengal. The Bangarh plate of Mahīpāla I[1] and the Dinājpur pillar inscription[2] inform us that some usurpers drove Vigrahapāla from the throne and that he, after losing his kingdom, took shelter in the eastern country where water abounds (*dēśē prāchi prachurapayasi*). His heroic son Mahīpāla recovered the lost kingdom of his father. The two characteristics, water-abounding and eastern, agree well with the present districts which composed the ancient kingdom of Samataṭa,—so well that it is impossible to suggest any other country which answers equally to the description; and little room is left for doubt that the eastern country alluded to was the kingdom of Samataṭa. The new Bāghāurā image inscription, which is the earliest of the reign of Mahīpāla, finally settles all doubts on the point. When we find that Samataṭa was under Mahīpāla so early as in the third year of his reign, we cannot but conclude that it was Samataṭa where Vigrahapāla took shelter, suffering reverses in war with the usurper, and leaving north Bengal in the hands of the victor. The fact of the earliest inscription of Mahīpāla turning up in Samataṭa points to his having probably been crowned there and this was perhaps the loyal country used by him as the base of operations in his fight with the usurper for the recovery of his father's kingdom.

The *ślōka* in the Bangarh plate which describes Vigrahapāla's sojourn in the eastern country has been copied also in the Āmgāchhi plate[3] of his great-grandson Vigrahapāla III, where,

[1] *J. A. S. B.*, Vol. LXI, pp. 77-87 and *Gauḍalēkhamālā*, p. 91. Also *Ep. Ind.*, Vol. XIV, page 224.
[2] *J. A. S. B.*, 1911, p. 615.
[3] *Indian Antiquary*, Vol. XXI, pp. 97-101.

curiously, it is applied to him. Mr. R. D. Banerji, M.A., in his Monograph on the Pālas of Bengal,[1] is inclined to discredit the statements of the *ślōka* on this ground. When a *ślōka* describing some events in the history of a monarch, occurring in a copper-plate of his son, is reproduced in a copper-plate of the great-grandson of that monarch and is applied to that great-grandson, it is presumable that the former application is correct, and the latter plate is (i) either a forgery or (ii) the composition of a very silly panegyrist, who was unaware of the historical significance of the *ślōka* and took it only as an attempt at conventional panegyrics, or (iii) the repetition denotes some similar event in the life of the latter monarch.

The inscription is incised under the lotus-seat of a standing image of Nārāyaṇa (Vishṇu) about 3′ high, between two kneeling figures. It is in a perfect state of preservation and is legible throughout without any difficulty. The lines measure each 6″ in length and the characters are ⅜″ long. The characters belong to the North-Eastern variety, specifically called the **Kuṭila character**, which gave birth to the Bengali characters of the modern days. The inscription is **dated**; but the date is given in regnal years. It refers itself to the reign of a king called Mahīpāla, presumably **Mahīpāla I** of the Pāla dynasty of Bengal; Mahīpāla II had a very short and troubled reign, terminating in the successful Kaivarta revolt. As the chronology of the Pāla kings of Bengal is still uncertain, it is difficult to give the exact year of the inscription; but it cannot be far removed from **976 A.D.**

The language is **Sanskrit**. In orthography, the only point to note is the absence of the *avagraha* sign in *puṇyayaśō abhi°* (l. 4). No distinctive mark of *virāma* is added to final consonants. There are **numerical figures** for 3, 2 and 7.

TEXT.

1 [सिद्धिरस्तु][2] सम्वत् ३ माघदिने २७ श्रीमहीपालदेवराज्ये
2 कीर्त्तिरियं नारायणभट्ट[ा]रकाख्या समतटे वि(बि)लकीन्द-
3 कीयपरमवैष्णवस्य वणिकलोकदत्तस्य वसुदत्तसुत-
4 स्य मातापित्रोरात्मनश्च पुण्ययशो भिवृद्धये[3]

TRANSLATION.

May success attend. The **year three, the 27th day of Māgha**. In Samataṭa, in the kingdom of Śrī **Mahīpāla-dēva**, this meritorious work, namely (the image of) the lord Nārāyaṇa, is of the merchant **Lōkadatta**, belonging to (the village of) Bilakīndaka—a great devotee of **Vishṇu**—son of **Vasudatta**, for the furtherance of the spiritual merit and fame of himself and parents.

3. THE KEOĀR VISHṆU IMAGE INSCRIPTION.

The inscription was discovered by myself in 1909. That year, in the month of June, I happened to be on a visit to the little village of Keoār, some three miles to the south-east of Rāmpāl, the famous site of the ancient capital of the Sēna kings of Bengal, in the Munshiganj Sub-division of the Dacca district. I found the image lying on its face, half buried in earth, and on turning it for inspection, I noticed the inscription. The image has now been fixed against the outside wall of the *maṭh* in the same village.

The inscription is incised on the pedestal of an image of **Vishṇu**, about 3′ in height. It is in four lines, each line measuring 7″; but the last line is an inch shorter, for want of plane space to write upon. The letters are about ½″ in height and are everywhere boldly incised.

[1] *Memoirs, A. S. B.*, Vol. V, No. 3. [2] Expressed by a symbol. [3] Read यशोऽभिवृद्धये.

The second couplet has been much injured towards the end by the erosion of the stone, and the several letters could with difficulty be recognized.[1]

The inscription is in verse throughout, and consists of two couplets. The language is correct **Sanskrit**, with only a single exception, which is perhaps an engraver's mistake. The letters belong to the **Kuṭila variety**, current in Bengal in the 10th, 11th, and 12th centuries. The inscription is not dated; but paleographical considerations would not possibly allow of an earlier date than the early part of the **13th century A.D.** It records the installation of an image of the lord **Vishṇu** by one **Vaṅgōka**, great-grandson of **Śauriśarman**, grandson of **Pitāmaha** and the offspring of the couple **Sayōga** and **Anuyami**.

The absence of a royal name in a pretty long inscription is rather remarkable, though by no means uncommon. It may suggest that the inscription belongs to a period when there was no king worth the name to refer to at the time of the installation of the image. There is another fact which confirms this supposition. The Brāhmaṇa family to which Vaṅgōka belonged is spoken of as hailing from some place in Varēndrī, i.e. north Bengal. They must have migrated to Vaṅga, which included the *parguṇa* of Vikramapura, the region where the image was found, not long before the installation of the statue, as the fact of their descent from a stock of Varēndrī was, in Vaṅgōka's estimation, still of sufficient distinction to merit a special mention. The name Vaṅgōka is also significant. In a family where the first three of the line are named in pure Sanskrit after the sacred names of gods, the naming of the fourth member after the name of a country signifies that he was born just after the family had migrated into that country, and the migration was an important event in the family history.

The period at the end of the 12th century A.D. which necessitated the migration of Vārēndrī Brāhmaṇas from north to east Bengal must have been the time when Lakshmaṇasēna was worsted by Muhammad-bin-Bakhtyar, about 1200 A.D., and the old king and his court fled to Vikramapura. Muhammad established his court at Deb-kot, 14 miles south of Dinajpur, in the heart of Varēndrī, and orthodox Brāhmaṇas must have had a rather hot time of it, necessitating flight to the Vaṅga country, where the Sēnas still had sway. The history of the reign of the sons of Lakshmaṇasēna is very imperfectly known; but erasures of royal names on their copper-plates suggest fratricidal war and consequent anarchy, and the present inscription may well belong to this troublous period.

TEXT.

1 [सिद्धिरस्तु][2] अयमानुयमेयेन सयोगाङ्गभुवा विभुः [।]
2 वङ्गोकेन कृतो विष्णुर्विष्णुसालोक्यकाम्यया [॥]
3 वरेन्द्रीतटकीयेन शाण्डिल्यकुलजन्मना [।] पिताम-
4 हस्य पौत्रेण प्रणप्त्रा शौरिशर्मणः ॥

TRANSLATION.

ay success attend! Longing for a residence in the heaven of Vishṇu, this (image of) the Lord Vishṇu was consecrated by **Vaṅgōka**, hailing from [the village of] **Taṭaka** in **Varēndrī**, offspring of the body of **Sayōga** and (begotten on) **Anuyami**, in the race of (the Saint) **Śāṇḍilya**, grandson of **Pitāmaha** and great-grandson of **Śauriśarman**.

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[1] I should put it on record here that the assistance of my friend Prof. Rādhāgōvinda Basak, M.A., was of very great use to me in obtaining a correct decipherment and interpretation of the inscription.

[2] Expressed by a symbol.

Some Image Inscriptions from East Bengal.

I. The Bharella Nartesvara Image Inscription of the reign of Layahachandra: the 18th year.



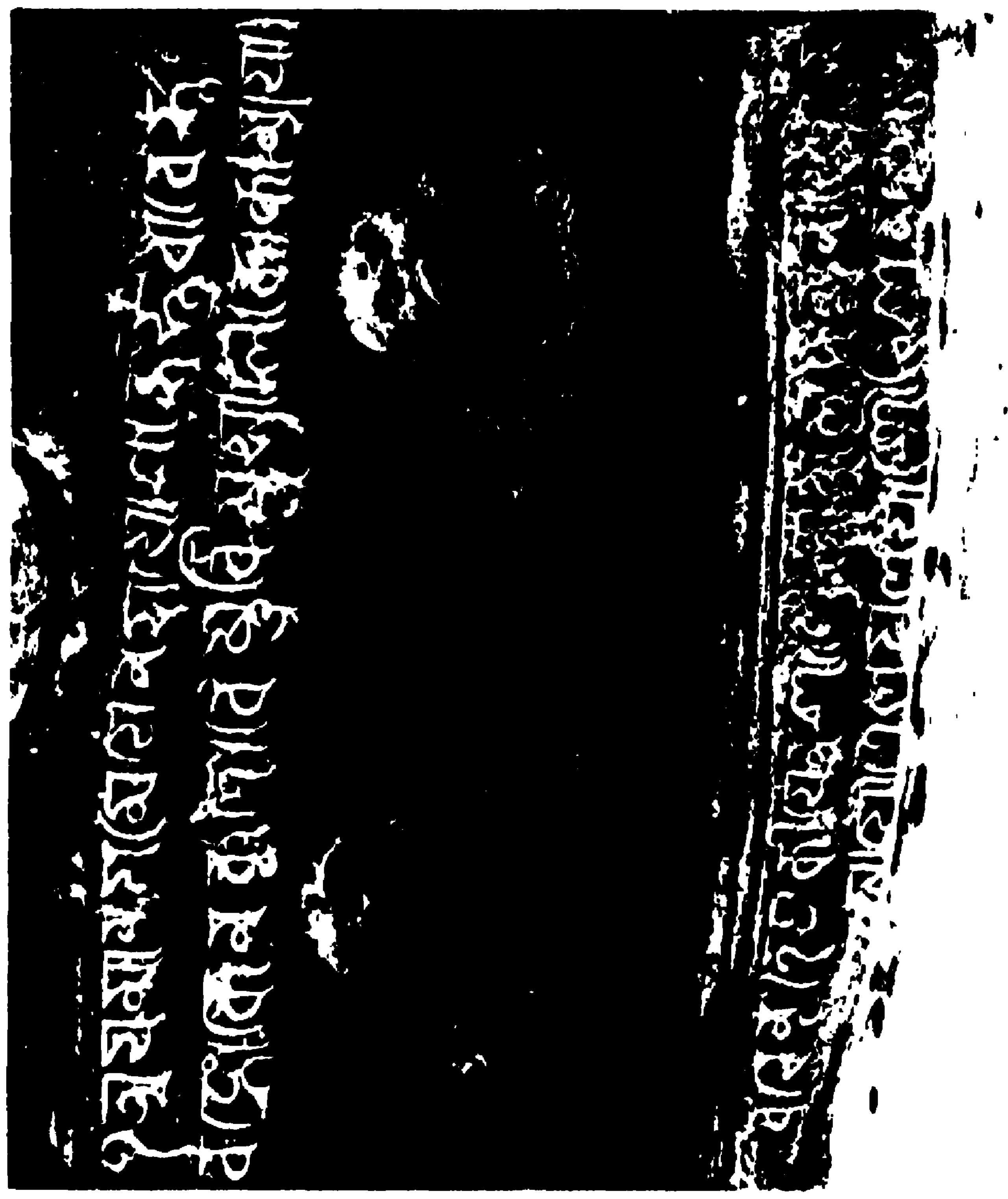
SCALE ONE-HALF

II. The Baghaura Narayana Image Inscription of the reign of Mahi-Pala I: the 3rd year.



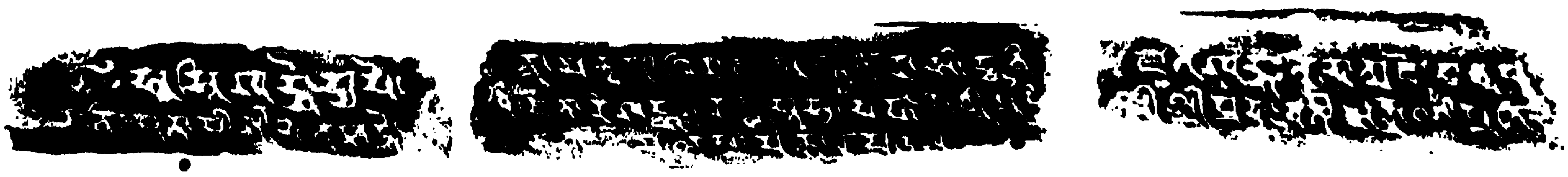
SCALE TWO-THIRDS

III. The Kewar Vishnu Image Inscription.



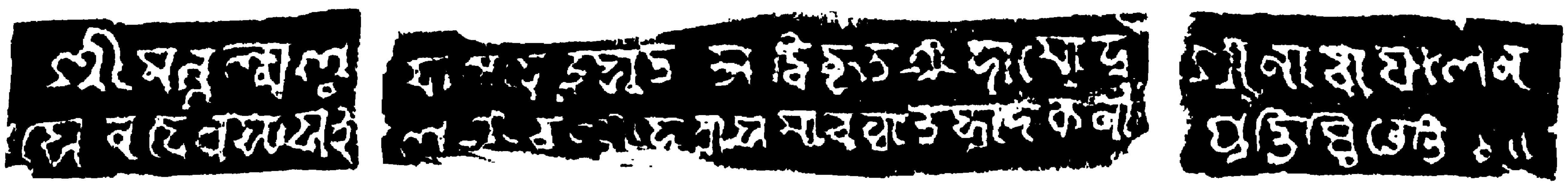
SCALE ONE-HALF

IV. The Deulbadi Sarvani Image Inscription of Mahadevi Prabhavati, Queen of Deva-Khadga.



SCALE FOUR-FIFTHS

V. The Dacca Chandi Image Inscription of Lakshmana-Sena: the 3rd year.



SCALE TWO-THIRDS

F. W. THOMAS

WHITTINGHAM & GRIGGS, COLL.

4. THE DEULBĀḌĪ SARVVĀṆĪ IMAGE INSCRIPTION OF MAHĀDĒVĪ PRABHĀVATĪ, QUEEN OF DĒVA-KHAḌGA.

Deulbāḍī is a village situated about 14 miles south of Comillā, on the trunk road running from Comillā to Chittagong. The image with which we are dealing was found about two decades ago by one Muhammad Faqir Choudhury, when demolishing the ruins of an ancient structure standing on plot No. 447 of the Settlement Map of Jāmmurā, a *mauza* in which the small village of Deulbāḍī is included, under Police Station Chauddagrāma, in the Tippera district. A fine brass statuette of the sun-god, in which the god is represented sitting inside his one-wheeled car, drawn by seven spirited horses, as well as some brass *liṅgas*, of which one was inscribed with a short votive inscription,[1] were discovered along with the image of **Sarvvāṇī**. Babu Taranath Chakrabarttī, the then Sub-Inspector of Police in charge of the Chauddagrāma Police Station, secured the images and placed them with one Kailās Chandra Chakrabarttī of Deulbāḍī. There the images remained for about sixteen years, until they were bought by Babu Saratchandra Chakrabarttī and Babu Nibāran Chandra Chakrabarttī of the village Dājdi, Police Station Chāndpur, District Tippera. These two brothers are the priests of a temple on the Chaṇḍīmurā peak of the Lālmāi Hills in the district of Tippera, near the Lālmāi Station on the Assam Bengal Railway. As the image installed in the temple of Chaṇḍī had long disappeared, these two brothers were anxious to get an image of Chaṇḍī for their temple, and they obtained the present image from a cousin of Kailās, who in the meantime had died. The image was brought to Comillā along with the other images discovered, and for cleaning they were placed in the care of Babu Mahesa Chandra Bhaṭṭāchāryya, a well-known Homœopathic druggist. When the images were with Mahesa Babu, the inscriptions on the Sarvvāṇī image and on one of the *liṅgas* began to attract attention. Babu Anukūlchandra Roy, Manager, Wards' Estates, Comillā, sent me an imperfect rubbing of the inscription on the image. I at once recognized that this was a new inscription of the Khaḍgas and wrote to Anukūl Babu to that effect. With the help of Mr. F. C. French, C.S.I., I.C.S., late Commissioner of the Dacca Division and President of the Dacca Museum Committee, I opened negotiations for the acquisition of the image for the Dacca Museum and went over to Comillā and obtained rubbings of the inscription and photographs of the image. The owners of the image, after much persuasion by Rai Annadāprasād Sēn Bahādur, the Additional District Magistrate, and Mr. T. Emerson, C.I.E., I.C.S., the then Magistrate of Tippera, consented to part with the image on condition that a duplicate should be made for them and a sum of money given. At this juncture the annual grant received by the Dacca Museum from the Bengal Government was reduced from Rs. 6,000 to Rs. 3,000 and all ideas of acquiring the image had to be abandoned. The image was taken to the temple at Chaṇḍīmurā and set up for worship. I am informed that it has since been stolen from the temple and lost sight of.

The image is of the goddess **Sarvvāṇī**, one of the forms of Durgā. It is about 20″ in height and rather heavy. A portion of the rim of the top towards the proper left is broken away and lost. The image is cast in low relief. The technique is rather crude, and the pose rigid. The goddess has eight arms, holding on the proper left, from the bottom upwards, the thunderbolt, the bell, the bow and the shield; and on the proper right, from the bottom upwards, the conch-shell, the goad, the sword and the wheel. Two maids are on her two sides, holding fly-whisks. She stands on a lotus-seat on the back of a couchant lion, with a rather well-executed head. The image was gilt all over with thin sheets of gold, the pious work of queen **Prabhāvatī**, and the original gilding is still intact in places. The white patches in the photograph show where it still clings fast.

[1] दे[य*]धर्म्मोयं चाचार्य्यप्र[म*]भद्रस्य.

The inscription refers itself to the reign of a king called **Dēva-Khaḍga** of the Khaḍga line of kings, who ruled over Samataṭa[1] towards the end of the 7th century A.D. The existence of the Khaḍga line of kings in east Bengal became known from the discovery in 1884 of two grants of Dēva-Khaḍga, evidently the most powerful monarch of the line. These two plates were finally edited by the late Babu Gangamohan Laskar, M.A., in the *Memoirs of the Asiatic Society of Bengal*, Vol. I, No. 6.

The inscription records the names of three generations of the **Khaḍgas**;—**Khaḍgōdyama**, the founder of the line, his son **Jāta-Khaḍga** and his son **Dēva-Khaḍga**. All these names were known from the copper-plate grants of Dēva-Khaḍga referred to above, and it has nothing new to tell us in this respect. It informs us that **Prabhāvatī**, queen of Dēva-Khaḍga, caused the image of **Śarvvāṇī** to be covered with gold leaves out of reverence for the goddess. The name of Prabhāvatī also was known previously, as she figures in one of the plates of Dēva-Khaḍga as a donor of land to a Buddhist monastery. The royal family of Samataṭa seems to have been of a particularly religious turn of mind. Yuan-Chwang states that Śīlabhadra, the head of the University of Nālanda, came of the royal stock of Samataṭa. We can hardly conceive at this distance of time what an exalted position it must have been. As the head of the greatest centre of Buddhist culture of the time, he must have occupied the position of the dictator of the then Buddhist world. It is probable that he was a Khaḍga, and those who kept alive the name of Khaḍgas in later times tried in their way to emulate their illustrious predecessor by noble deeds of piety and benevolence. Dēva-Khaḍga was a donor of land to Buddhist monasteries, and his wife and son also followed in his footsteps, as appears from his grants. Yuan-Chwang calls the king of Samataṭa a devout Buddhist and Dēva-Khaḍga seems very well to merit this appellation. The pious soul of queen Prabhāvatī has once again spoken to posterity through the present discovery.

The image reveals a curious state of religious belief prevalent in those days. Queen Prabhāvatī and the members of her husband's family were all devout Buddhists; but all the same she did not feel it irreligious in any way to pay reverence to a goddess who must have belonged to the Brahmanical pantheon. Harshavardhana, to whose court Yuan-Chwang came, in a similar manner divided his veneration among the Buddha, the Sun-god and Śiva. All these clearly show that we must revise our idea of the Buddhists and Hindus of ancient days as two communities shut up in watertight compartments. They were more like the present-day Śāktas and Vaishṇavas than otherwise.

Asrafpur, near the bank of the old and the real Brahmaputra, the find-place of the two plates of Dēva-Khaḍga, and Deulbāḍi, sixty miles south-east, almost at the foot of the hills of Tippera, the find-place of the present image, mark respectively the western and eastern limits of Samataṭa, the kingdom of the Khaḍgas.

The inscribed surface at the base of the image is about 8″ in length, and the characters are approximately ⅓″ long. They are bigger in the two extreme sections than in the middle one. They are incised pretty deeply and are in an almost perfect state of preservation.

The characters belong to the Eastern variety of the **Gupta script** current in Bengal towards the end of the 7th and the beginning of the 8th century A.D. Mr. Laskar, at the time of editing the plates of Dēva-Khaḍga, assigned them to "the 8th or 9th century A.D.", while Mr. R. D. Banerji in his Bengali *History of Bengal* is, on paleographical grounds[2] inclined to push the date still further forward. I believe, however, that these Khaḍga inscriptions cannot be taken farther than the beginning of the 8th century A.D. No one, I believe, can

[1] *Vide* my paper "A forgotten kingdom of East Bengal," *J. A. S. B.* March 1914.

[2] *Vide* also Mr. Banerji's Monograph on "The Palas of Bengal." *Memoirs, A. S. B.*, Vol. V, No. 3, p 67.

compare the letters of the present inscription, as well as those of the two plates of Dēva-Khaḍga, with the letters of the Nidhanpur plates of Bhāskaravarman,[1] the Aphsad and the Shahpur inscriptions of Āditya-sēna-dēva, the Deobarnark inscription of Jīvita-gupta, the Banskhera and Madhuban plates of Harsha, without coming to the conclusion that a span of about a hundred years covers them all. A comparison of the characters of the Khaḍga inscriptions with those of the earliest known inscriptions of the Pāla kings leaves no doubt that the former must be considerably prior to the latter, possibly by about a century.

There is nothing special to note in the **orthography**, except the doubling of *v* after *r* in Śarvvāṇī. The use of only one symbol for *b* and *v* is almost the rule in Eastern Indian inscriptions, as in the modern Bengali language.

The language is correct **Sanskrit** verse. The inscription is in three lines on three sections; the first two lines run over all the three sections, while the third line is incised only on the middle one.

I edit the inscription from rubbings and photographs in my possession.

TEXT.

1 [सिद्धिरस्तु][2] स्वस्ति खड्गोद्यमो नाम नृपाधिराजस्तत्सूनुरासीद्भुवि जातखड्गः [।*]
तदात्मजो दानप-

2 तिः प्रतापी श्रीदेवखड्गो विजितारिखड्गः ।[।*] राज्ञस्तस्य महादेवी
महिषी श्रीप्रभावती [।*] स(श)र्व्वाणीप्रतिमां

3 भक्त्या हैमलिप्तामकारयत् । * *

TRANSLATION.

May success attend! May welfare accrue! There was an overlord of kings, **Khaḍgōdyama** by name. His son (became known) on earth (as) **Jāta-Khaḍga**. His powerful and benevolent son **Dēva-Khaḍga** was (like) a sword, a conqueror of all foes. **Prabhāvatī,** the queen-consort of this king, out of reverence for Śarvvāṇī, covered her image with gold.

5. THE DACCA CHAṆḌĪ IMAGE INSCRIPTION OF THE 3RD YEAR OF LAKSHMAṆA-SĒNA-DĒVA.

The inscription is on the pedestal of an image of **Chaṇḍī**, discovered about four decades ago in the ruins of Rāmpāl, the site of Śrī Vikramapura, the capital of the Sēnas referred to in their land grants, in the *pargana* that still goes by the same name, included at present in the Dacca and Faridpur districts. It is at present worshipped in a small temple situated in the Dālbāzār quarter of **Dacca** on the Farāshganj Road, a little to the east of the Northbrook Hall. The late Babu Baikuṇṭhanāth Sēn, Deputy-Inspector of Schools, of Sonārang, District Dacca, was an enthusiastic collector of images, quite a crop of which used to turn up every year in the course of casual excavations in and around Rāmpāl. These, on discovery, were usually put under a tree by a roadside to receive the chance worship of the passers-by. Sometimes they were put to altogether unholy uses and sometimes consigned again to neglect and oblivion. It does great credit to Baikuntha Babu that he alone, amidst the general callousness of his countrymen, was alive to the artistic and archæological merit of these relics of the past, and not a few of them owe their safe preservation to his labour. Many pieces of his collection are, it is gratifying to note, now in the Dacca Museum. This inscribed image of Chaṇḍī was one of Baikuntha Babu's finds, and he must have presented it to the founder of the temple in which it at present lies.

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1 *Ep. Ind.*, Vol. XII, p. 65.

2 Expressed by a symbol.

The inscription, however, seems to have aroused little interest at the time of the discovery, and its existence was unknown to the gentry of Dacca. In April 1911 Mr. R. D. Banerji, M.A., of the Archæological Survey, and some friends discovered it, and from that time it has been known to the public.

In August 1911 Mr. Banerji published a reading of this inscription in the Bhādra, 1318 (B.S.), number of the *Pratibhā*, the journal of the Dacca Sāhitya Parishat in an article on king Lakshmaṇa-sēna of Bengal. Four months later, in the Pausha number of the same journal, in a long article on the Sēna kings of Bengal, I gave my reading of the inscription. In June 1912 I published the inscription, with a half-tone reproduction of both the inscription and the image, in the *Dacca Review*, in an article on the era of king Lakshmaṇa-sēna. In *J. A. S. B.*, July 1913 Mr. Banerji re-published it in his article on king Lakshmaṇa-sēna. The inscription has thus been published four times; yet it cannot be said that up to this time it has been properly edited Mr. Banerji's reading in the *J. A. S. B.*, as well as his description of the image, is not free from mistakes.

The image is about 30″ high and is a rather fine example of Bengal sculpture of the time of the Sēnas. The goddess has four arms and she stands in a graceful *tribhaṅga* pose on a full-blown lotus over a couchant lion. Her upper left hand holds a bunch consisting of a half-blown lotus with some buds and leaves. The lower left hand holds an ornamental basket-like thing, either a flower basket or a waterpot. The upper right hand holds an elephant-goad and the lower one is in the *Varada-Mudrā*. Two attendant female figures stand on the two sides of the goddess, and two elephants are pouring water over her from two pitchers. She seems to be a curious mixture of Gaja-Lakshmi and Chaṇḍī and may represent the Śakti of the god Harihara.

The **inscription** is in an excellent state of preservation. The inscribed surface is about 9½″ in length, and the characters are approximately ⅛″ high. The characters may be called **Bengali characters** of the 12th century A.D. They are not very well executed and are far inferior in execution to those of the Deopara inscription of Vijaya-sēna. They may be compared in style and coarse execution to the Buddha Gayā inscription of Aśōkachalla-dēva executed in the 51st *atīta-rājya* year of Lakshmaṇa-sēna-dēva (*Epigraphia Indica*, Vol. XII, p. 29). In this connection I may lay stress on a fact which is sometimes forgotten. Printed types have accustomed us to a standard; but in ancient times contemporary inscriptions varied as much in style as handwritings; because the inscriptions were always written with ink or lac on the surfaces to be inscribed and were then engraved by sculptors who were not always literate.

The inscription refers itself to the **third year of the era of king Lakshmaṇa-sēna** of the Sēna dynasty of Bengal. As the era has been proved to have begun in 1119 A.D.,[1] the inscription must have been incised in the year 1121 A.D. It records that *Adhikṛita* **Dāmōdara**, son of **Māladatta**, began the image of Chaṇḍī in the third year of the era of Lakshmaṇa-sēna and that his relative (younger brother?) **Nārāyaṇa** installed the image in the fourth year. The inscription is in two lines on three sections. I edit it from the original stone. The **language** is incorrect **Sanskrit**. *Suta* and *adhikṛita*, which should have been in the 3rd case according to grammatical rules, are both used in the 1st case.

TEXT.

1 श्रीमल्लक्ष्मण- मालदे(द)त्तसुत अधिकृत श्रीदामोदरे- श्रीनारायणेन

2 सेनदेवस्य सं ३- था श्रीचण्डीदेवी समारब्धा तद्भ्रादकाना-प्रतिष्ठितेति ४ ॥

[1] *Indian Antiquary*, Vol. XIX, p. 1.

Note on the reading.

The decipherment of this short inscription presents some very serious difficulties. The fourth letter in what I have read as *Māladetta* is very curious. It bears little resemblance to any letter or compound used in the inscriptions of the time. Mr. Banerji has read it as *Māladei*; but certainly *tta* it is not like any *i* hitherto met with in the inscriptions of the period. It has moreover no perpendicular straight stroke to the proper left, distinctive of an *i* of the period. The following additional objections to the reading may be advanced :—

(i) *Māladei* must be a Prākṛit form of Māla-dēvī, and it is not easy to understand why a Prākṛit word should be used in a Sanskrit inscription.

(ii) The use of only the mother's name to denote parentage is unusual in a North Indian inscription.

The letter that one would expect here is *va*, reading the name as Māladēva; but the letter used does not bear the slightest resemblance to the *va* of the period or any of the *va*'s used in this inscription. Then what is this letter? My reading of the letter as *tta* is only conjectural, based on the principle of greatest resemblance and possibility and on a surmise which I shall advance presently. [Perhaps we should read *Mālā-khaḍga*.—Ed.]

The second difficulty is about the reading of the name of the donor. Mr. Banerji has read it as *Dāmōdrēṇa*; but *ē* is clearly absent from *dra*. We can read it at best *Dāmōdraṇa*, which is inadmissible. I have read it *Dāmōdarēṇa*, which is admittedly the correct form of the word. It should be noted that the *ā* mark of *ṇā*, the letter below *dra*, is projected upwards to a considerable distance. I believe the engraver wrote *Dāmōdaṇa* through mistake and attempted to put in *re* between *da* and *ṇā*. Want of space stood in his way, and he fared very ill. The projection of *ā* of *ṇā* should, in my opinion, be taken for the engraver's attempt to make a small *ra*, and the *r* mark of *Dāmōdra* should be taken as the *ē* he tried to make. I have thus read *rē* between *da* and *ṇā*.

The next difficult word is what I have read as *tad-bhrādakanā*. Mr. Banerji read it as *tabhrādakana*, which gives no meaning whatever, and which moreover is incorrect, as *na* has a clear *ā* after it. The word must be a qualifying word of *Nārāyaṇēna*, which follows it, and consequently must be in the 3rd case. It is also expected that the word should signify some sort of relationship between the donor and the founder, whose names prove them to have been close relatives. I have therefore read the word as *tad-bhrādakanā*, and would translate it as " by his younger brother." The word *bhrādakana*, again, is perplexing and new. I can suggest nothing better than that it was an irregular East-Indian compound of the two words *bhrātā* and *kanīyān*.

Now, Dāmōdara was evidently a high officer of the state, and we may expect to see his younger brother too in a similar position. We know from the Tarpandighi plate of Lakshmaṇasēna[1] that one Nārāyaṇa-datta was his minister of peace and war. Can this Nārāyaṇa-datta be the Nārāyaṇa of the present inscription? Māla is an appellation of Vishṇu, and the names Nārāyaṇa and Dāmōdara are also names of Vishṇu. It was evidently a Vaishṇava family and the name of the father agrees well with the names of his sons. If our conclusions, which are based on a series of surmises, are right, and if Nārāyaṇa of the present inscription can be identified with Nārāyaṇa-datta, the minister of peace and war of Lakshmaṇa-sēna, we may read the name of Dāmōdara's father as Māladetta and emend it to Māla-datta by taking the *e* of *de* as an engraver's mistake.

Mr. Banerji read a *visarga* after *iti*, which is inadmissible; it should be read as 4, resembling the modern Bengali symbol for 4. It is not usual to put the two ciphers of a *visarga* in touch with one another as has been done in the present case.

[1] *Ep. Ind.*, Vol. XII, p. 6.

TRANSLATION.

The **year 8 of the era** of the illustrious **Lakshmaṇa-sēna-dēva.** The (image of the) goddess **Chaṇḍī** was begun by the Superintendent (*Adhikṛita*) **Dāmōdara,** son of **Māladatta** and was installed by his younger brother **Nārāyaṇa** (in the year) 4.

No. 25.—A NOTE ON THE VAKATAKA INSCRIPTION FROM GANJ.

(*No. 4 of Vol. XVII of the Epigraphia Indica.*)

BY K. N. DIKSHIT, M.A., POONA.

The last four paragraphs of the article on 'a Vakataka inscription from Ganj' illegible correction in the light of information available from the Poona plates of the thirteenth year of the Vākāṭaka queen Prabhāvatiguptā (*Ante*. Vol. XV, p. 32 ff.) and another grant of the 19th year of Pravarasēna (II) issued by the same queen Prabhāvatiguptā (*Ind. Ant.* Vol. LIII, page 48). The characters used in the Ganj and Nachna inscriptions are later in date than those of the Poona plates of Prabhāvatiguptā. The Pṛithvishēṇa of these inscriptions is therefore more likely to be identified with Pṛithvīshēṇa II of the Bālāghāṭ plates, who was the great-grandson of Prabhāvatiguptā and not with Pṛithvīshēṇa I her father-in-law. On paleographical grounds, Prof. Jouveau-Dubreuil attributes the Nachna inscriptions to the fifth century instead of the 4th and to Pṛithvīshēṇa II, in preference to Pṛithvīshēṇa I (Ancient History of the Deccan, page 73). The present epigraph which is almost identical with the Nachna inscriptions, can therefore also be assigned to Pṛithvīshēṇa II who must have lived in or about the last quarter of the 5th or the opening years of the sixth century A.D.

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[1] The figures refer to pages: *n.* after a figure, to footnotes; and *add.* to the additions on pp. vii to xiii. The following other abbreviations are used:—*ch.* = chief; *co.* = country; *di.* = district or division; *do.* = ditto; *dy.* = dynasty; *E.* = Eastern; *f.* = female; *k.* = king; *m.* = male; *mo.* = mountain; *ri.* = river; *s. a.* = same as; *sur* = surname; *te.* = temple; *vi.* = village or town; *W.* = Western.